

eMachines

D620

Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to <http://csd.acer.com.tw>

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on eMachines D620 service guide.

Date	Chapter	Updates

Copyright

Copyright © 2008 by Acer Incorporated. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of Acer Incorporated.

Disclaimer

The information in this guide is subject to change without notice.

Acer Incorporated makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties of merchantability or fitness for any particular purpose. Any Acer Incorporated software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (and not Acer Incorporated, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software.

Acer is a registered trademark of Acer Corporation.

Intel is a registered trademark of Intel Corporation.

Core Duo and Core 2 Duo are trademarks of Intel Corporation.

Other brand and product names are trademarks and/or registered trademarks of their respective holders.

Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

System Specification

Features

Below is a brief summary of the computer's many feature:

Operating system

- Genuine Windows Vista®

Platform

- AMD Athlon™ 2650e processor or higer
- AMD RS690MC/SB600 chipset
- IEEE 802.11b/g

Display and Graphics

- 14.1" WXGA TFT LCD, 1280 x 800 pixel resolution
- Built-in AMD RS690MC (Marketing name: ATI Radeon™ Xpress 1200 Graphics, integrated graphics card)

Storage Subsystem

- 2.5" hard disk drive
- Optical drive options:
 - DVD-Super Multi double-layer drive
 - DVD/CD-RW combo drive

Audio

- Two built-in Acer 3DSonic stereo speakers
- High Definition Audio support
- Built-in microphone
- MS-Sound compatible

Communication

- Integrated webcam* (for selected models only, please refer to Appendix A for more details)
- WLAN: IEEE 802.11b/g
- LAN: Fast Ethernet; Wake-on-LAN ready

Privacy control

- BIOS user, supervisor, HDD passwords
- Kensington lock slot

Special keys and controls

- 88-/89-key keyboard
- Touchpad pointing device

I/O Interface

- Four USB 2.0 ports
- External display (VGA) port
- Headphones/speaker/line-out jack
- Microphone-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adaptor

Power Subsystem

- ACPI 3.0
- 48.8 W 4400 mAh Li-ion battery pack (6-cell)
- 3-pin 65W AC adapter

Dimensions

- 331 (W) x 248 (D) x 29.7/41.08 (H) mm
(13.03 x 9.76 x 1.16/1.61 inches)
- 2.4 kg (5.29 lbs.) with 6-cell battery pack

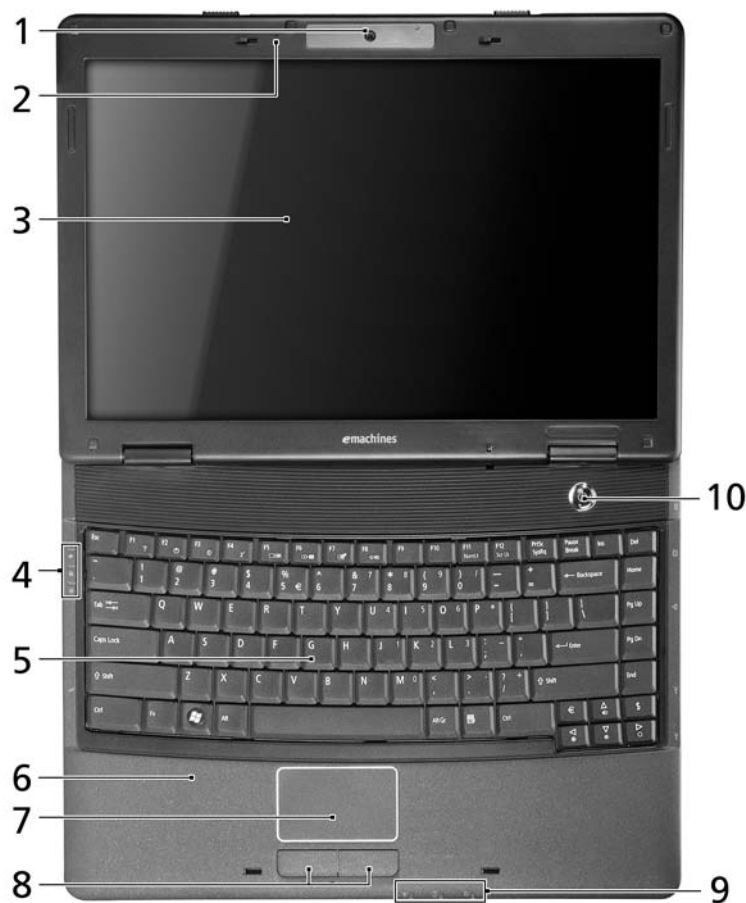
Environment


- Temperature:
 - Operating: 5° C to 35° C
 - Non-operating: -20° C to 65° C
- Humidity (non-condensing):
 - operating: 20%~80%
 - Non-operating: 20%~80%








Your eMachines Notebook Tour

After knowing your computer features, let us show you around your new eMachines computer.

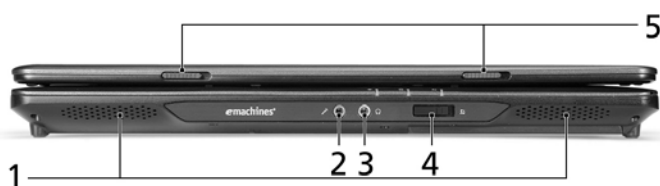
Top view






#	Icon	Item	Description
1		Integrated webcam	Web camera for video communication. (only for certain models)
2		Microphone	Internal microphone for sound recording.
3		Display screen	Also called Liquid-Crystal Display (LCD), display computer output

4		HDD	Indicates when the hard disk drive is active.
		Num Lock	Lights up when Num Lock is activated.
		Caps Lock	Lights up when Caps Lock is activated.
5		Keyboard	For entering data into your computer.
6		Palmrest	Comfortable support area for your hands when you use the computer.
7		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8		Click buttons (left and right)	The left and right buttons function like the left and right mouse buttons.
9		Power	Indicates the computer's power status.
		Battery	Indicates the computer's battery status. 1. Charging: The light shows amber when the battery is charging. 2. Fully charged: The light shows green when in AC mode.
		Wireless LAN communication indicator	Indicates the status of wireless LAN communication.
10		Power button	Turns the computer on and off.

Closed front view



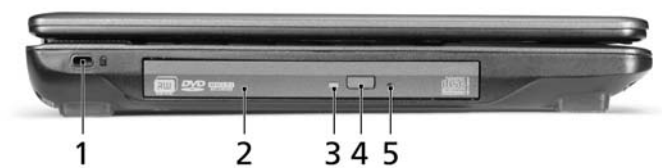
#	Icon	Item	Description
1		Speakers	Left and right speakers deliver stereo audio output.
2		Microphone-in jack	Accepts inputs from external microphones.
3		Headphones/speaker/ line-out jack	Connects to audio line-out devices (e.g., speakers, headphones).
4		Wireless communication switch	Enable/disable the wireless function. (manufacturing option).
5		Latch	Locks and releases the lid.


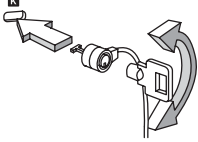
Rear Panel



#	Icon	Item	Description
1		Ventilation slots	Enable the computer to stay cool, even after prolonged use.

Left View







#	Icon	Item	Description
1		Kensington lock slot 	Connects to a Kensington-compatible computer security lock. Note: Wrap the computer security lock cable around an immovable object such as a table or handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator*	Lights up when the optical drive is active.
4		Optical drive eject button*	Ejects the optical disk from the drive.
5		Emergency eject hole*	Ejects the optical drive tray when the computer is turned off. Note: Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.

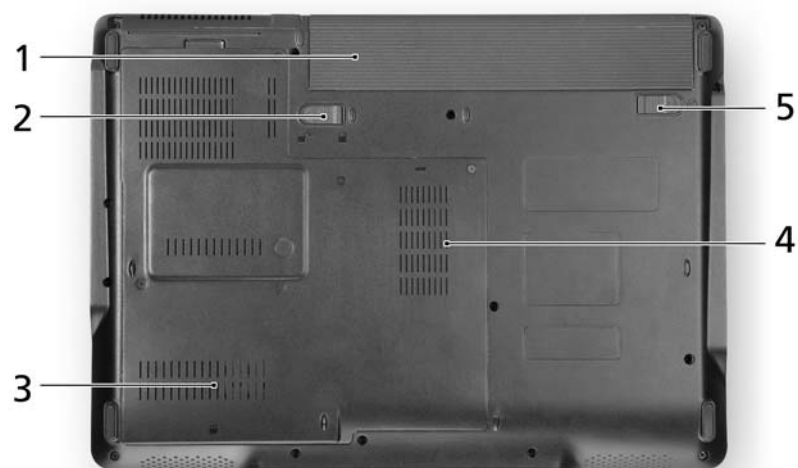
NOTE: Location depends on model






Right View



#	Icon	Item	Description
1		USB 2.0 port	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
2		Ethernet (RJ-45) port	Connects to an Ethernet 10/100-based network
3		External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).
4		DC-in jack	Connects to an AC adapter.

Bottom Panel



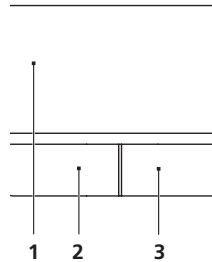
#	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.
2		Battery lock	Locks the battery in position.
3		Hard disk bay	Houses the computer's hard disk (secured with screws).
4		Memory compartment	Houses the computer's main memory.
5		Battery release latch	Releases the battery for removal.

Touchpad

The built-in touchpad is a pointing device that senses movement on its surface. This means the cursor responds as you move your finger across the surface of the touchpad. The central location on the palmrest provides optimum comfort and support.

Touchpad Basics

The following items show you how to use the touchpad with two-click buttons.



- Move your finger across the touchpad **(1)** to move the cursor.
- Press the left **(2)** and right **(3)** buttons located beneath the touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad is the same as clicking the left button.

Function	Left Button (2)	Right Button (3)	Main touchpad (1)
Execute	Click twice quickly.		Tap twice (at the same speed as double-clicking the mouse button).
Select	Click once.		Tap once.
Drag	Click and hold, then use finger on the touchpad to drag the cursor.		Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the touchpad on the second tap and drag the cursor.
Access context menu		Click once	

NOTE: When using the touchpad, keep it - and your fingers - dry and clean. The touchpad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping too hard will not increase the touchpad's responsiveness.

NOTE: By default, vertical and horizontal scrolling is enabled on your touchpad. It can be disabled under Mouse settings in Windows Control Panel.

Using the Keyboard

The keyboard has full-sized keys and an embedded numeric keypad, separate cursor, lock, Windows, function and special keys.

Lock Keys and Embedded Numeric Keypad

The keyboard has three lock keys which you can toggle on and off.



Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock <Fn> + <F11>	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad. Note: <Fn>+<F11> only for certain models.
Scroll Lock <Fn> + <F12>	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the keycaps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.

Desired Access	Num Lock On	Num Lock Off
Number keys on embedded keypad.	Type numbers in a normal manner.	N/A
Cursor-control keys on embedded keypad	Hold <Shift> while using cursor-control keys.	Hold <Fn> while using cursor-control keys.
Main keyboard keys	Hold <Fn> while typing letters on embedded keypad.	Type the letters in a normal manner.

Windows Keys










The keyboard has two keys that perform Windows-specific functions.

Key	Icon	Description
Windows key		<p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu.</p> <p>It can also be used with other keys to provide a variety of functions:</p> <ul style="list-style-type: none"><⊞> : Open or close the Start menu<⊞> + <D>: Display the desktop<⊞> + <E>: Open Windows Explore<⊞> + <F>: Search for a file or folder<⊞> + <G>: Cycle through Sidebar gadgets<⊞> + <L>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain)<⊞> + <M>: Minimizes all windows<⊞> + <R>: Open the Run dialog box<⊞> + <T>: Cycle through programs on the taskbar<⊞> + <U>: Open Ease of Access Center<⊞> + <X>: Open Windows Mobility Center<⊞> + <BREAK>: Display the System Properties dialog box<⊞> + <SHIFT+M>: Restore minimized windows to the desktop<⊞> + <TAB>: Cycle through programs on the taskbar by using Windows Flip 3-D<⊞> + <SPACEBAR>: Bring all gadgets to the front and select Windows Sidebar<CTRL> + <⊞> + <F>: Search for computers (if you are on a network)<CTRL> + <⊞> + <TAB>: Use the arrow keys to cycle through programs on the taskbar by using Windows Flip 3-D <p>Note: Depending on your edition of Windows Vista, some shortcuts may not function as described.</p>
Application key		<p>This key has the same effect as clicking the right mouse button; it opens the application's context menu.</p>

Hotkeys

The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness, volume output and the BIOS utility.

To activate hotkeys, press and hold the <Fn> key before pressing the other key in the hotkey combination.

Hot Key	Icon	Function	Description
Fn-F4		Sleep	Puts the computer in Sleep mode.
Fn-F5		Display toggle	Switches display output between the display screen, external monitor (if connected) and both.
Fn-F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn-F7		Touchpad toggle	Turns the internal touchpad on and off.
Fn-F8		Speaker toggle	Turns the speakers on and off.
Fn-△		Volume up	Increases the speaker volume.
Fn-▽		Volume down	Decreases the speaker volume.
Fn-▷		Brightness up	Increases the screen brightness.
Fn-◁		Brightness down	Decreases the screen brightness

Special Keys

You can locate the Euro symbol and the US dollar sign at the upper-center and/or bottom-right of your keyboard.

The Euro symbol

1. Open a text editor or word processor.
2. Either press <€> at the bottom-right of the keyboard, or hold <Alt Gr> and then press the <5> key at the upper-center of the keyboard.

NOTE: Some fonts and software do not support the Euro symbol. Please refer to www.microsoft.com/typography/faq/faq12.htm for more information.

The US dollar sign

1. Open a text editor or word processor.
2. Either press <\$> at the bottom-right of the keyboard, or hold <Shift> and then press the <4> key at the upper-center of the keyboard.

NOTE: This function varies according to the language settings.

Hardware Specifications and Configurations

Processor

Item	Specification
CPU type	AMD Athlon 2650e (Acer PN:KC.AE002.265)
Clock Speeds	1.6 GHz
L2 Cache	512KB
Front Side Bus	800 MHz
Socket Interface	AM 2 socket (or called Socket AM2; DT processor)
TDP (Thermal Design Power)	15W

Processor Specification

Processor#	CPU Speed	Cores	Bus Speed	Mfg Tech	Cache Size	Package	Acer PN
Athlon 2650e	1.6GHz	N/A	800MHz	N/A	512KB	Socket AM2	KC.AE002.265

System Board Major Chipsets

Item	Specification
System core logic	ATI RS690MC+SB600
HDD controller	ATI SB600
Memory controller	built in AMD Athlon 2650e
Video controller	ATI Radeon™ Xpress 1200 Graphics (built-in AMD RS690MC)
Audio controller	Realtek ALC268 or Conexant Audio Codec CX-20561-15Z
PCMCIA controller	N/A (no PCMCIA card reader available on this model)
LAN controller	ATI RS690MC+Marvell8040
Modem controller	N/A (no modem function available on this model)
Keyboard controller	Winbond WPC8773L

Hard Disk Drive Interface

Item	Specification											
Vendor	Hitachi Travelstar 5K320 (Falcon-B)				Toshiba (Virgo BS)				Western Digital (Scorpio ML160)			
Model Name	HTS543212L9A300	HTS543216L9A300	HTS543225L9A300	HTS543232L9A300	MK1252GSX	MK1652GSX	MK2552GSX	MK3252GSX	WD1200BEVT	WD1600BEVT	WD3500BEVT	WD3200BEVT
Form factor and Interface type	2.5 inch Serial ATA											
Capacity (GB)	120	160	250	320	120	160	250	320	120	160	250	320
Sector size (Bytes)	512				512				512			
Data heads	2	2	3	4	2	2	4	4	2	2	3	4
Data disks	1	1	2	2	1	1	2	2	1	1	2	2
Rotational speed (RPM)	5400				5400				5400			

Hard Disk Drive Interface

Item	Specification		
Data buffer (MB)	8	8	8
Media transfer rate (Mbytes/s, max)	775	794 (MK3252GSX)	933
Interface transfer rate (Mbytes/s, max)	150	N/A	150
Voltage tolerance	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	v0.25
Supported protocols	ACPI 1.0b/2.0/3.0 compliance, PCI 2.2, System/HDD Password Security Control, INT 13h Extensions, PnP BIOS 1.0a, SMBIOS 2.4, BIOS Boot Specification, Simple Boot Flag 1.0, Boot Block, PCI Bus Power Management Interface Specification, USB Specification 1.1/2.0, IEEE 1394 1.0, USB/1394 CD-ROM Boot Up support, PC Card Standard 1995 (PCMCIA 3.0 Compliant Device), HD audio, WfM 2.0, Preboot Execution Environment 2.1, Boot Integrity Service Application Program Interface (BIS) 1.0, PC2002/2005 compliant

System Memory

Item	Specification								
Memory controller	AMD Athlon 2650								
DIMM socket number	2 sockets								
Supports maximum memory size	2 GB for 32 bit OS, 4 GB for 64bit OS								
Vendor	Samsung			A-DATA	Hynix		Nanya		
Model name	M470T6464QZ3	M470T2864QZ3	M470T5663QZ3	HYOPE1B163BZ	HYMP112S64CP6-Y5	HYMP125S64CP8-Y5 LF	NT512T64UH8B0FN-3C	NT1GT64UH8D0FN-3C	NT2GT64U8HD0BN-3C
DIMM type	DDR2 Synchronous DRAM								
DIMM speed (MHz)	667								
DIMM size	512MB	1GB	2GB	2G	1GB	2GB	512MB	1GB	2GB

Video

Item	Specification
VGA controller	ATI Radeon™ Xpress 1200 Graphics (built-in AMD RS690MC)

Video

Item	Specification
Features	Intel Graphic Media Accelerator (GMA) X3000 with up to 256 MB of Intel Dynamic Video Memory Technology 4.0 (8MB of dedicated system memory, up to 256MB of shared system memory), supporting Microsoft DirectX 9 and DirectX 10
VGA output	Maximum resolutions supported by the VGA output for different refresh rates are: 2048x1536 @85Hz (pixel clock at 388.5MHz) for 4:3 format 2560x1440 @75Hz (pixel clock at 397.25MHz) for 16:9 format 2456x1536 @60Hz (pixel clock at 320MHz) for 16:10 format

Audio

Item	Specification
Audio controller	Realtek ALC268 Codec or Conexant Audio Codec CX-20561-15Z
Features	Two built-in Acer 3DSonic stereo speakers, Supports high definition audio, Built-in microphone, MS-sound compatible

PCMCIA Port

Item	Specification
PCMCIA controller	N/A (no PCMCIA port available on this model)
Card type support	N/A
Number of slot	N/A

LAN

Item	Specification
LAN controller	ATI RS690MC+Marvell8040
LAN connector type	RJ45
Features	Onboard Gigabit Ethernet, PCI-E interface, support ASF 2.0

Wireless LAN module

Item	Specification	
Vendor	Foxconn	
Model name	Atheros XB63	Broadcom 4312
Data throughput	54 Mbps	54 Mbps
Protocol	802.11b/g	802.11 b/g
Interface	PCI bus (mini PCI socket for wireless module)	PCI bus (mini PCI socket for wireless module)

Modem

Item	Specification
Modem controller	N/A (no modem port available on this model)
Baud rate	N/A
Modem connector type	N/A

Bluetooth Module

Item	Specification
Vendor	N/A (no Bluetooth function available on this model)
Model name	N/A
Protocol	N/A
Connector type	N/A

Keyboard and Input Devices

Item	Specification
Keyboard controller	Winbond WPC8773L
Model name	Acer FineTouch keyboard
Features	hotkey controls, embedded numeric keypad, multi-language support, three easy-launch buttons, and one front-access communication switch

Combo Drive Interface

Item	Specification	
Vendor	Toshiba	Sony
Model name	TS-L463A	CRX890S
Drive type	Internal Slim CD-RW/DVD combo drive	
Data transfer rate	Write: <ul style="list-style-type: none"> • CD-R: 24X • CD-RW: 24X Read: <ul style="list-style-type: none"> • DVD-ROM: 8X • CD-ROM: 24X 	Write: <ul style="list-style-type: none"> • CD-R: 24X • CD-RW: 24X Read: <ul style="list-style-type: none"> • DVD-ROM: 8X • CD-ROM: 24X
Buffer Memory	2 MB	2 MB
Interface	IDE	IDE
Applicable disc format	CD: CD-DA (Red Book) - Standard Audio CD & CD-TEXT, CD-ROM (Yellow Book Mode1 & 2) - Standard Data, CD-ROM XA (Mode2 Form1 & 2) - Photo CD, Multi-Session, CD-I (Green Book, Mode2 Form1 & 2, Ready, Bridge), CD-Extra/ CD-Plus (Blue Book) - Audio & Text/ Video, Video-CD (White Book) - MPEG1 Video, CD-R (Orange Book Part), CD-RW & HSRW (Orange Book Part Volume1 & Volume2), Super Audio CD (SACD) Hybrid type US & US+ RW, DVD: DVD-ROM (Book 1.02), DVD-Dual, DVD-Video (Book 1.1), DVD-R (Book 1.0, 3.9G), DVD-R (Book 2.0, 4.7G) - General & Authoring, DVD+R (Version 1.0), DVD-RW, DVD+RW, DVD+R DL, DVD-R DL, Support CPRM (read), Support VCPS (read)	CD: CD-DA, CD-ROM/XA, CD-i, Caraoke CE, Video CD, Multi-session Photo CD, Enhanced CD, i-trax CD, CD extra, CD Plus, CD-Text, CD-R and CD-RW DVD: DVD-ROM (DVD-5, DVD-9, DD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+R DI, DVD+RW, DVD-R DL, DVD-RAM
Power supply	5 V DC	N/A

DVD Drive (Super-Multi) Interface

Item	Specification		
Vendor	Toshiba	Pioneer	HLDS
Model name	TS-L633A	DVR-TD08RS	GT10N
Drive type	Internal Slim DVD/CD writer		
Data transfer rate	<p>Write:</p> <ul style="list-style-type: none">• CD-R: 24X CAV• CD-RW: 24X CAV• DVD-R/+R/+RW/-RW (single layer): 6X, 8X ZCLV• DVD-R/+R (double layer): 8X CAV• DVD-RAM: 5X ZCLV <p>Read:</p> <ul style="list-style-type: none">• CD-R/RW/ROM: 24X Max• DVD-ROM (single layer): 8X• DVD-ROM (double layer): 6X• DVD-RAM: 5X ZCLV.• DVD-R/+R/+RW/-RW (single layer): 8X CAV• DVD-R/+R (double layer): 6X CAV	<p>Write:</p> <ul style="list-style-type: none">• CD-R: 24X• CD-RW: 24X• DVD-RW: 6X• DVD-R/+R/+RW: 8X <p>Read:</p> <ul style="list-style-type: none">• DVD-RAM: 5X	<p>Write:</p> <ul style="list-style-type: none">• CD-R: 24X• CD-RW: 16X• DVD-R: 8X• DVD-RW: 4X• DVD-RAM: 5X• DVD+R(DL): 2.4X• DVD+R: 8X• DVD+RW: 4X <p>Read:</p> <ul style="list-style-type: none">• CD-R/RW/ROM: 24X• DVD-R/RW/ROM: 8X
Buffer Memory	2 MB		
Interface	Enhanced IDE(ATAPI) compatible		
Applicable disc format	DVD-RAM, DVD-R/RW, DVD+R (SL, DL)/RW, CD-R/RW, DVD-ROM, DVD-RAM, DVD-R, DVD-RW, DVD+R (SL, DL), DVD+RW; CD-R, CD-RW, CD-ROM, CD-ROM XA, CD-DA, CD-I, CD-Extra, CD-Text, Photo CD, Video CD		
Power supply	5V DC		

DVD Drive (Super-Multi) Interface

Item	Specification		
Vendor	Sony	Sony	PLDS
Model name	AD-7590S	AD7580S	DS-8A2S
Drive type	Internal Slim DVD/CD writer		
Data transfer rate	Write: <ul style="list-style-type: none">• CD-R: 24X CAV• CD-RW: 24X CAV• DVD-R/+R/+RW/-RW (single layer): 6X, 8X ZCLV• DVD-R/+R (double layer): 8X CAV• DVD-RAM: 5X ZCLV Read: <ul style="list-style-type: none">• CD-R/RW/ROM: 24X Max• DVD-ROM (single layer): 8X• DVD-ROM (double layer): 6X• DVD-RAM: 5X ZCLV.• DVD-R/+R/+RW/-RW (single layer): 8X CAV• DVD-R/+R (double layer): 6X CAV	Write: <ul style="list-style-type: none">• CD-R: 24X• CD-RW: 24X• DVD-RW: 6X• DVD-R/+R/+RW: 8X Read: <ul style="list-style-type: none">• DVD-RAM: 5X	Write: <ul style="list-style-type: none">• CD-R: 24X• CD-RW: 16X• DVD-R: 8X• DVD-RW: 4X• DVD-RAM: 5X• DVD+R(DL): 2.4X• DVD+R: 8X• DVD+RW: 4X Read: <ul style="list-style-type: none">• CD-R/RW/ROM: 24X• DVD-R/RW/ROM: 8X
Buffer Memory	2 MB		
Interface	Enhanced IDE(ATAPI) compatible		
Applicable disc format	DVD-RAM, DVD-R/RW, DVD+R (SL, DL)/RW, CD-R/RW, DVD-ROM, DVD-RAM, DVD-R, DVD-RW, DVD+R (SL, DL), DVD+RW; CD-R, CD-RW, CD-ROM, CD-ROM XA, CD-DA, CD-I, CD-Extra, CD-Text, Photo CD, Video CD		
Power supply	5V DC		

Battery

Item	Specification			
Vendor	Sanyo	Sony	Panasonic	Simplo
Battery Type	Li-Ion			
Pack capacity	6 cell: 2.2 mAh			

LCD

Item	Specification			
Vendor	AUO	CMO	LG	Samsung
Model name	B141EW04-V4 (Glare)	N141I3-L02 (Glare)	LP141WX3-TLN1 (Glare)	LTN141W3-L01-J (Glare)
Screen diagonal (mm)	14.1" WXGA			
Display resolution (pixels)	1280 x 800	1280 x 800	1280 x 800	1280 x 800
Aspect ratio	16:10	N/A	N/A	N/A
Active area (mm)	303.36 x 189.6	N/A	303.74 x 189.84	303.4 x 189.6
Pixel pitch (mm)	0.237	N/A	0.2373x0.2373	0.237
Mode	TN	N/A	N/A	N/A
Number of colors	262 K	262 K	262,144 (6 bit)	262 K
Color saturation (NTSC%)	45	N/A	N/A	N/A
Typical white luminance (cd/m ²) also called brightness	200	220	200 (typ.5p)	200
Contrast ratio	400:1	300:1	300:1	500:1
Response time (optical rise time + fall time) (msec)	16	16	16	25
Power consumption (watt)	5.1	5.3	N/A	N/A
Supply voltage (v)	3.3	N/A	3.3	N/A
Backlight	1 CCFL	N/A	N/A	N/A
Outline dimensions (mm)	319.5 x 205.5 x 5.2	319.5 x 205.5 x 5.2	320.0 x 199.0 x 5.5	319.5 x 205.5 x 5.5
Weight (g)	400	400	415 (max)	390

LCD Inverter

Item	Specification		
Vendor	YEC	Foxconn	RoHS
Model name	YNV-W02	T621240	VK.21189.406

AC Adapter

Item	Specification		
Vendor	Delta	Lite-On	Hipro
Model Name	SADP-65KB DFA	PA-1650-02AC	HP-OK065B13
	ADP-65KB BF	PA-1650-02AC LV4	HP-OK065B13 LV4
Output rating	19 V/3.42 A, 65 W	19 V/3.42 A, 65 W	19 V/3.42 A, 65 W
Input (Vac)	90 ~ 270	100 ~ 240	90 ~ 265

System Power Management

ACPI mode	Power Management
Off	<ul style="list-style-type: none">Mech. Off (G3): All devices in the system are turned off completely.Soft Off (G2/S5): OS initiated shutdown. All devices in the system are turned off completely.

System Power Management

ACPI mode	Power Management
On	<ul style="list-style-type: none">• Working (G0/S0): Individual devices such as the CPU and hard disk may be power managed in this state.• Suspend to RAM (S3): CPU set power down, VGA Suspend, PCMCIA Suspend, Audio Power Down, Hard Disk Power Down, CD-ROM Power Down, and Super I/O Low Power mode.• Save to Disk (S4): Also called Hibernation Mode. System saves all system states and data onto the disc prior to system shutdown.

System Utilities

BIOS Setup Utility

The BIOS Setup Utility is a hardware configuration program built into your system's BIOS (Basic Input/Output System). Since most systems are already properly configured and optimized, there is no need to run this utility. The BIOS setup utility stores basic settings for your system. You will need to run this utility if you encounter configuration problems. Refer to Chapter 4 Troubleshooting when problem arises.

Entering BIOS Setup

Power on the system to start the system POST process. During bootup, press **F2** to enter the BIOS setup screen.

NOTE: You must press **F2** while the system is booting. This key does not work during any other time.

BIOS Setup Primary Menus

There are several tabs on the setup screen corresponding to the six primary BIOS menus.

- Information
- Main
- Advanced
- Security
- Boot
- Exit

In the descriptive table following each of the screen illustrations, settings in **boldface** are the default and suggested parameter settings.

BIOS Setup Navigation Keys

Note the following reminders when moving around the Setup utility.

- Use the **Left** and **Right** arrow keys to move to the next page or to return to the previous screen.
- Use the **Up** and **Down** arrow keys to select an item.
- Use the **+** and **-** keys to select an option.

NOTE: You can configure a parameter that is enclosed in square brackets. Grayed-out items have fixed settings and are not user-configurable.

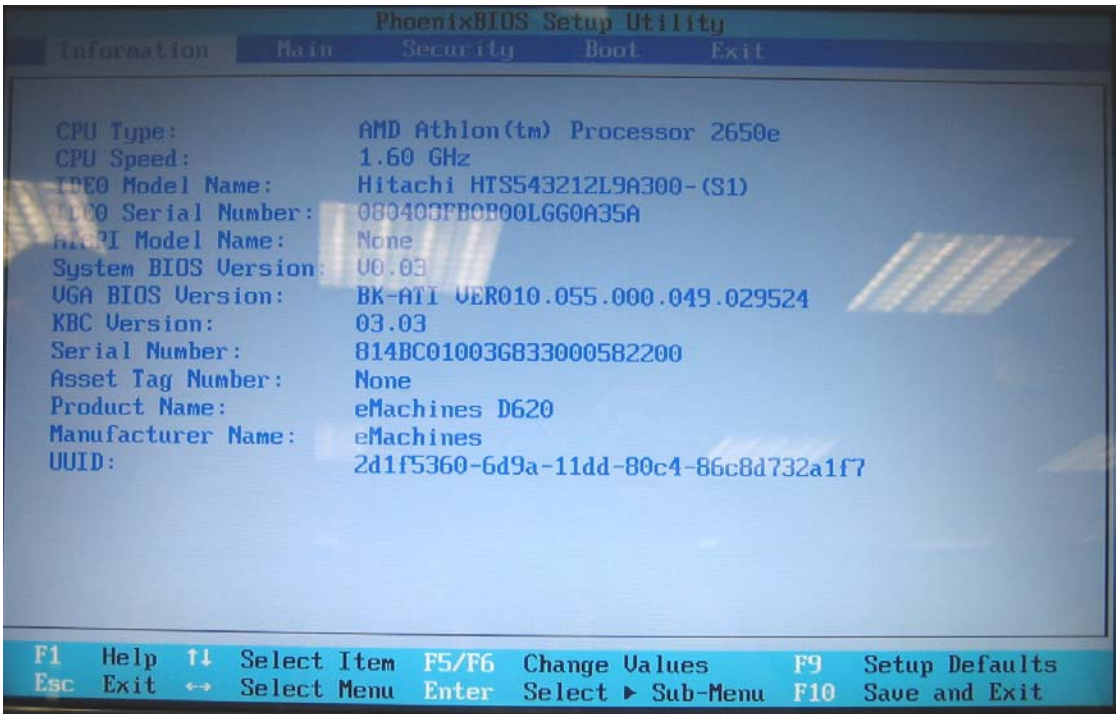
- Use the **Enter** key to display a submenu screen.

NOTE: When a parameter is preceded by an **arrow** or (**>**), it means that a submenu screen is available.

- Press **F1** for General Help using the BIOS setup.
- Press **F9** to load the default configuration.
- Press **F10** to save changes and close the BIOS setup.
- Press **Esc** to close the BIOS setup.

NOTE: The parameters on the screens shown in this Guide display default system values. These values may not be the same as those in the system. System information is subject to different models.

Information Menu



Parameter	Description
CPU Type	Type of processor currently installed in the system.
CPU Speed	Speed of the processor currently installed in the system.
IDE0 Model Name	Model name of HDD installed on the primary IDE channel.
IDE0 Serial Number	Serial number of HDD installed on the primary IDE channel.
IDE1 Model Name	Model name of devices installed on the secondary IDE channel. The hard disk drive or optical drive model name is automatically detected by the system.
IDE1 Serial Number	Serial number of devices installed on the secondary IDE channel.
ATAPI Model Name	Model name of the ATAPI CD/DVD-ROM drive installed in the system.
System BIOS Version	Version number of the BIOS setup utility.
VGA BIOS Version	Version number of the VGA firmware.
KBC Version	Version number of the keyboard controller.
Serial Number	Serial number of the system.
Asset Tag Number	Asset tag number of the system.
Product Name	Product name of the system.
Manufacturer Name	Name of the manufacturer of this system.
UUID	Visible only when an internal LAN device is present. UUID=32bytes

NOTE: The system configuration information varies in different models. This model is AMD platform, please refer to finish good units for actual

Main Menu

Phoenix TrustedCore(tm) Setup Utility

Information

Main

Advanced

Security

Boot

Exit

System Time: [10:10:10]

System Date: [04/28/2007]

System Memory: 640 KB

Extended Memory: 2046 MB

Video Memory: 256 MB

Quiet Boot: [Enabled]

Network Boot: [Enabled]

F12 Boot Menu: [Disabled]

D2D Recovery: [Enabled]

Item Specific Help

<Tab>, <Shift-Tab>, or <Enter> selects field.

F1 Help

↑↓ Select Item

-/+ Change Values

F9 Setup Defaults

Esc Exit

↔ Select Menu

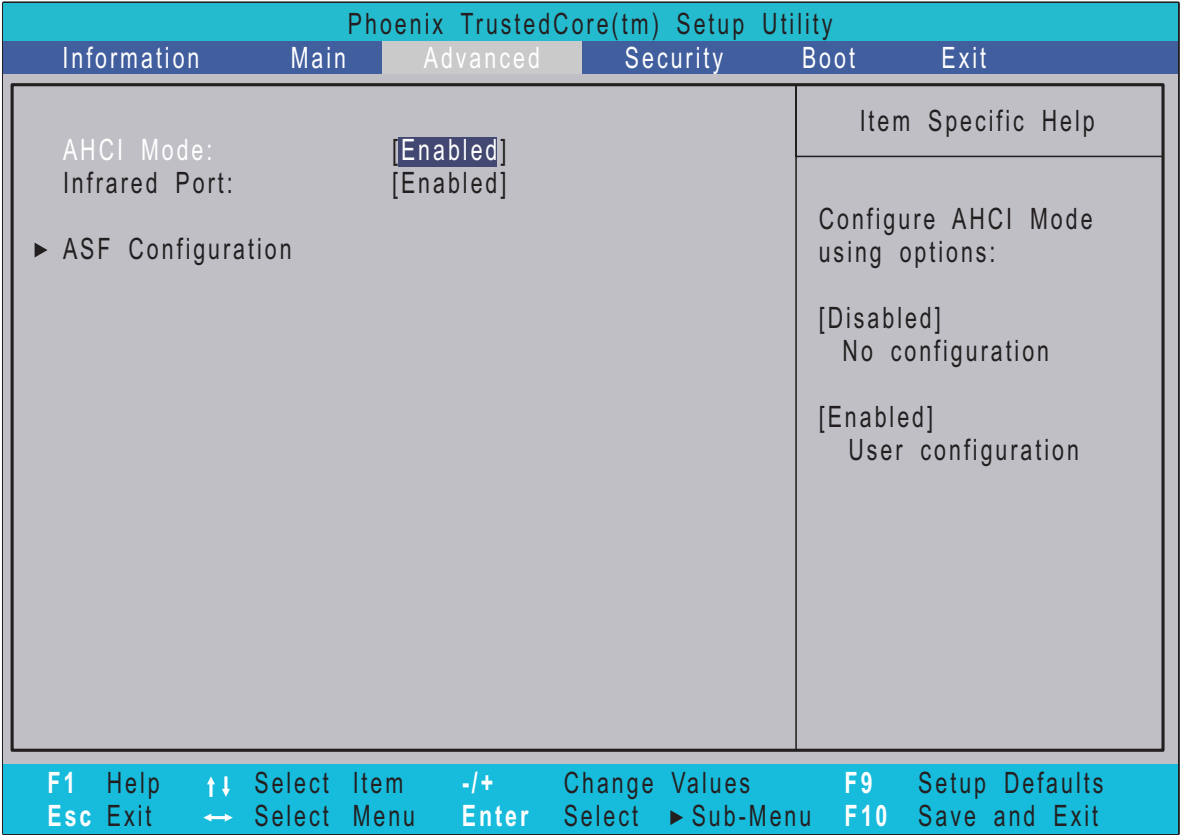
Enter Select

► Sub-Menu

F10 Save and Exit

Parameter	Description	Format/Option
System Time	Set the system time following the hour-minute-second format.	Format: HH:MM:SS (hour:minute:second)
System Date	Set the date following the weekday-month-day-year format.	Format MM/DD/YYYY (month/day/year)
System Memory	Total size of system memory detected during POST.	
Extended Memory	Total size of extended memory during POST.	
Video Memory	Total size of VGA memory.	
Quiet Boot	When Enabled, the BIOS splash screen is displayed during startup.	Enabled Disabled
Network Boot	When Enabled, the system can be booted from another PC on your LAN, such as a remote server.	Enabled Disabled
F12 Boot Menu	When Enabled, pressing the F12 key during POST brings up a menu of devices that you can select to boot.	Disabled Enabled
D2D Recovery	Enables or disables disk-to-disk recovery. D2D recovery is a method of restoring the system to factory configurations without using recovery CDs.	Enabled Disabled

Advanced Menu



Parameter	Description	Format/Option
AHCI Mode	Enables or disables access to SATA connectors via the AHCI (Advanced Host Controller Interface) Option ROM. AHCI is an interface specification that allows the storage driver to enable advanced SATA features such as Native Command Queuing and hot plug.	Enabled Disabled
Infrared Port	Enables or disables the infrared port.	Enabled Disabled
ASF Configuration	Press Enter to configure the Alert Standard Format feature.	

Security Menu

Phoenix TrustedCore(tm) Setup Utility

Information

Main

Advanced

Security

Boot

Exit

Supervisor Password Is:Clear

User Password Is:Clear

Secondary MAS.Disk Status:Clear

Set Supervisor Password[Enter]

Set User Password[Enter]

Set Secondary MAS.Disk Password[Enter]

Password on Boot:[Disabled]

Item Specific Help

Supervisor Password controls access of the whole setup utility. It can be used to boot up when Password on boot is enabled.

F1 Help

↑↓ Select Item

-/+ Change Values

F9 Setup Defaults

Esc Exit

↔ Select Menu

Enter Select

► Sub-Menu

F10 Save and Exit

Parameter	Description	Option
Supervisor Password Is	Indicates whether a supervisor password has been assigned.	Clear or Set
User Password Is	Indicates whether a user password has been assigned.	Clear or Set
Secondary MAS.Disk Status	Indicates whether a hard disk drive password has been assigned.	Clear or HDD Password Set
Set Supervisor Password	Press Enter to configure the supervisor password.	
Set User Password	Press Enter to configure the user password.	
Set Secondary MAS.Disk Password	Press Enter to configure the hard disk drive password.	
Password on Boot	Enables or disables security check during POST.	Disabled or Enabled

NOTE: Refer to the “Removing a System Password” section for more information on how to remove a password.

Setting a System Password

1. Use the **up/down** keys to select a password parameter (Set Supervisor Password, Set User Password, or Set Secondary MAS.Disk Password), then press **Enter**. A Password box will appear.
2. Type a password then press **Enter**.
The password may consist of up to six alphanumeric characters (A-Z, a-z, 0-9).
3. Retype the password to verify the first entry then press **Enter** again.
4. Press **F10**.
5. Select **Yes** to save the new password and close the Setup Utility.

Changing a System Password

1. Use the **up/down** keys to select a password parameter (Set Supervisor Password, Set User Password, or Set Secondary MAS.Disk Password), then press **Enter**.
2. Type the original password then press **Enter**.
3. Type a new password then press **Enter**.
4. Retype the password to verify the first entry then press **Enter** again.
5. Press **F10**.
6. Select **Yes** to save the new password and close the Setup Utility.

Removing a System Password

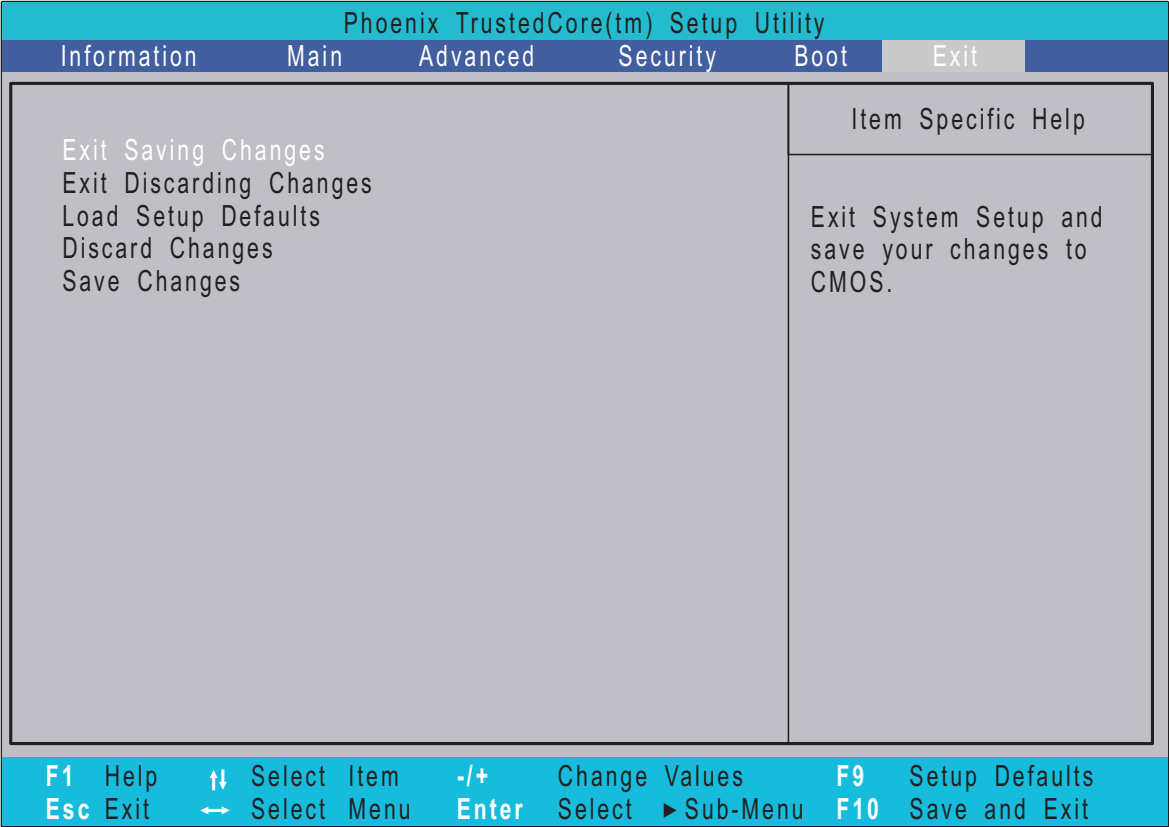
1. Use the **up/down** keys to select a password parameter (Set Supervisor Password, Set User Password, or Set Secondary MAS.Disk Password), then press **Enter**.
2. Enter the current password then press **Enter**.
3. Press **Enter** twice without entering anything in the new and confirm password fields.
4. After doing this, the system automatically sets the related password parameter to **Clear**.

Boot Menu

This menu allows you to set the drive priority during system boot-up. The system will attempt to boot from the first device on the list. If the first device is not available, it will continue down the list until it reaches an available device. BIOS setup will display an error message if the drive(s) specified is not bootable.

Phoenix TrustedCore(tm) Setup Utility					
Information	Main	Advanced	Security	Boot	Exit
Boot priority order: 1: IDE0: XXXXXXXXXXXX-(XX) 2: IDE1: 3: CD/DVD: XXXXXXXXXXXX-XXX XX-XXXX-XX 4: PCI LAN: MBA vXX.X.X Slot XXXX 5: USB HDD: 6: USB FDD: 7: USB Key: 8: USB CD/DVD ROM:				Item Specific Help	
				Use <↑> or <↓> to select a device, then press <F6> to move it up the list, or <F5> to move it down the list. Press <Esc> to escape the menu.	
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults		
Esc Exit	↔ Select Menu	Enter Select	▶ Sub-Menu	F10 Save and Exit	

Exit Menu



Parameter	Description
Exit Saving Changes	Save changes made and close the BIOS setup.
Exit Discarding Changes	Discards changes made and close the BIOS setup.
Load Setup Defaults	Loads the default settings for all BIOS setup parameters. Setup Defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.
Discard Changes	Discards all changes made in the BIOS setup.
Save Changes	Saves changes made in the BIOS setup.

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

Disassembly Requirements

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat screwdriver
- Philips screwdriver
- Hex screwdriver
- Plastic flat screwdriver
- Plastic tweezers
- **Thermal grease: Honeywell PCM45SP**

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

General Information

Pre-disassembly Instructions

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.



3. Place the system on a flat, stable surface.
4. Remove the battery pack. See "Removing the Battery Pack" on page 51.

Disassembly Process

The disassembly process is divided into the following stages:

- External module disassembly
- Main unit disassembly
- LCD module disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components. For example, if you want to remove the mainboard, you must first remove the keyboard, then disassemble the inside assembly frame in that order.

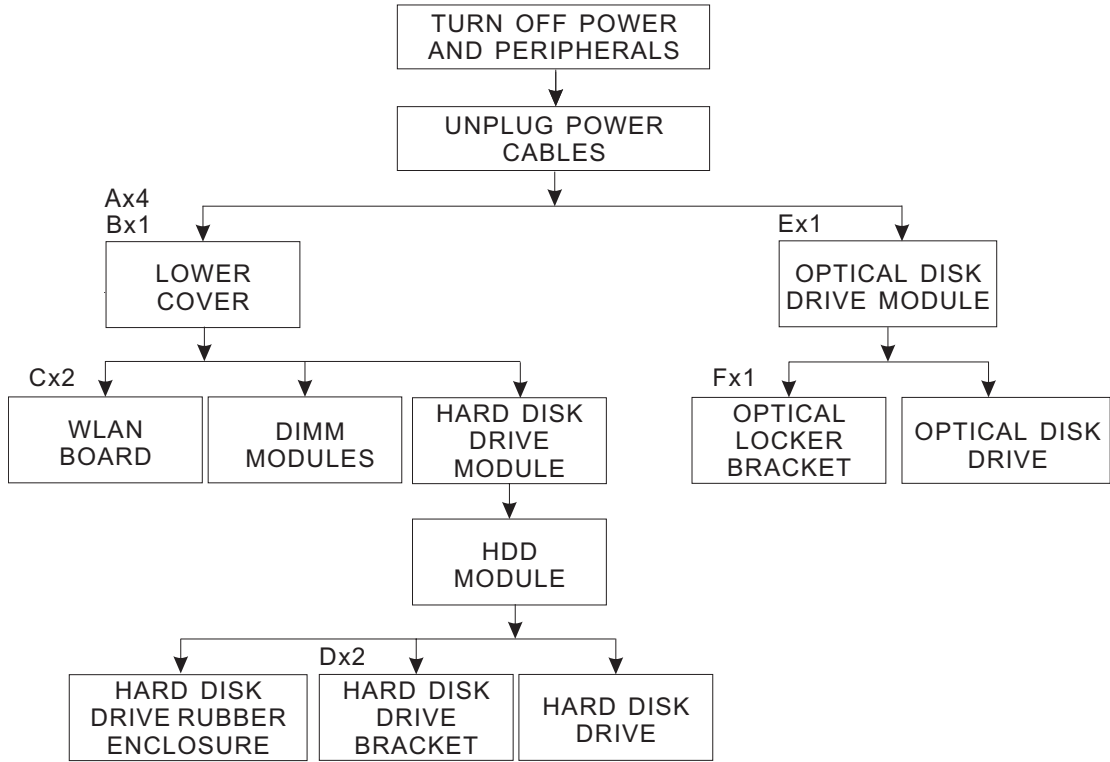
Main Screw List

Item	Screw	Color	Part No.
A	M2 x L4	Black/Silver	86.9A552.4R0
B	M2 x L18	Black	86.00G64.720
C	M2 x L3	Silver	86.9A552.3R0
D	M3 x L4	Silver	86.9A524.4R0
E	M2.5 x L6	Black	86.00E33.736
F	M2 x L2.5	Silver	86.00F22.722
G	M2 x L3	Silver	86.00C07.220
H	M2.5 x L5 (torque 1.6)	Black	86.00F87.735
	M2.5 x L5 (torque 3.0)		
I	M2.5 x L5 (torque 2.5)	Black	86.00F00.735

External Module Disassembly Process

External Modules Disassembly Flowchart

The flowchart below gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the mainboard, you must first remove the keyboard, then disassemble the inside assembly frame in that order.



Screw List

	Screw	Part No.
A	M2 x L4	86.9A552.4R0
B	M2 x L18	86.00G64.720
C	M2 x L3	86.9A552.3R0
D	M3 x L4	86.9A524.4R0
E	M2.5 x L6	86.00E33.736
F	M2 x L2.5	86.00F22.722

Removing the Battery Pack

- 1. Turn base unit over.
- 2. Slide the battery lock/unlock latch to the unlock position (1).

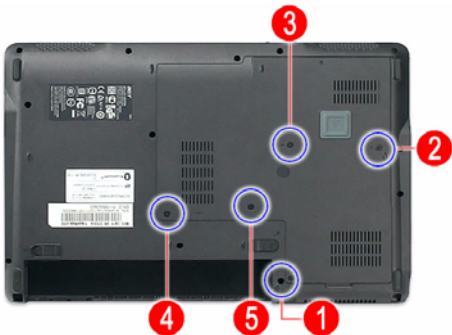


- 3. Slide and hold the battery release latch to the release position (2), then remove the battery from the main unit (3).



Removing the Lower Cover

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. Loosen the four screws (A) on the lower cover.



Step	Size (Quantity)	Color	Torque
1~4	M2 x L4 (4)	Black	1.6 kgf-cm

- 4. Remove the screw (B) on the lower cover.

Step	Size (Quantity)	Color	Torque
5	M2 x L18 (1)	Black	1.6 kgf-cm

- 5. Use a plastic screw driver to pry open the lower cover.

6. Remove the lower cover from the lower case.



Removing the DIMM

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. Push out the latches on both sides of the DIMM socket to release the DIMM.



5. Remove the DIMM module.



6. Do the same on the other board.

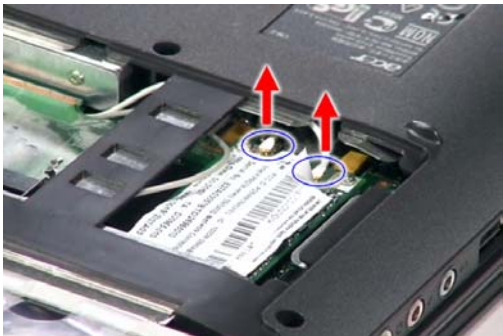
Removing the WLAN Board Modules

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.

4. Remove the mylar tape from the cable.



5. Disconnect the two antenna cables from the WLAN board, then move the antennas away from the board.



6. Remove the two screws (C) on the WLAN board to release the WLAN board.



Step	Size (Quantity)	Color	Torque
1~2	M2 x L3 (2)	Silver	1.6 kgf-cm

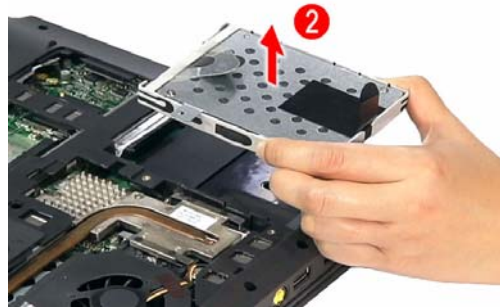
7. Detach the WLAN board from the WLAN socket.



NOTE: When attaching the antennas back to the WLAN board, make sure the cable are routed properly.

Removing the Hard Disk Drive Module

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. Pull the HDD module out by pulling on the mylar attached to it, gently slide-out the HDD module from its bay.



NOTE: To prevent damage to device, avoid pressing down on it or placing heavy objects on top of it.

NOTE: The HDD on this model does not have the rubber enclosure as above images show.

5. Remove the HDD rubber enclosure by gently prying open the enclosure, starting on either side (3) and proceeding down the bottom (4) and towards the top of the disk (5), then pull it up to detach from the HDD module (6).



NOTE: The HDD on this model does not have the rubber enclosure as above images show. Please skip these steps and got to next step directly.

6. Remove the two screws (D) on the HDD bracket.



Step	Size (Quantity)	Color	Torque
7	M3 x L4 (2)	Silver	1.6 kgf-cm

7. Remove the bracket as shown.



Removing the Optical Drive Module

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. Turn the base unit over, then remove the screw (E) on the bottom side of the unit.



Step	Size (Quantity)	Color	Torque
1	M2.5 x L6 (1)	Black	1.6 kgf-cm

- 5. Using the flat screwdriver, press the end of the module forward, then slide out the optical drive module from the main unit.



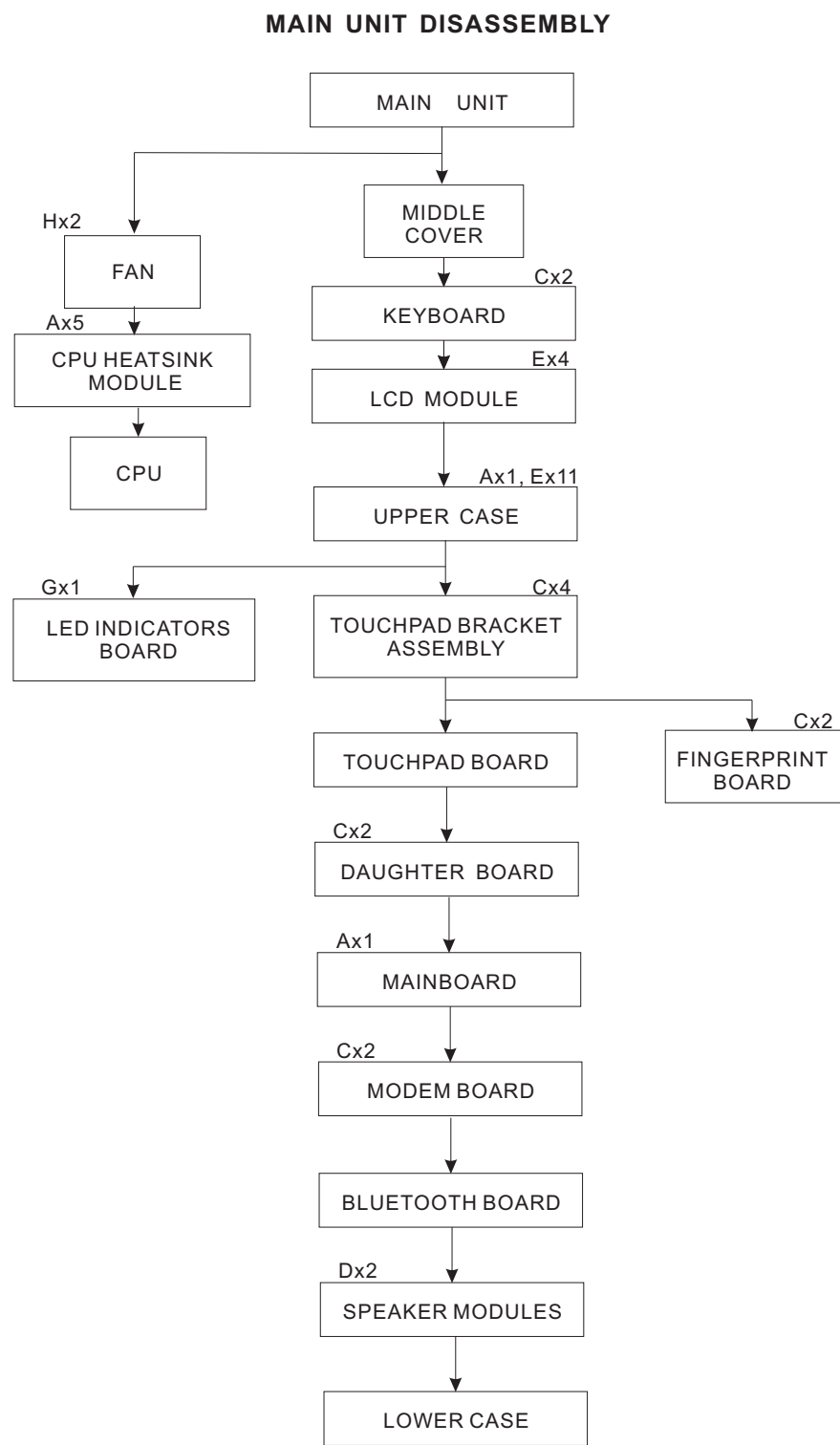
6. Remove the two screws (F) securing the optical bracket and remove the locker bracket from the optical disk drive module.



Step	Size (Quantity)	Color	Torque
1-2	M2 x L2.5 (2)	Silver	1.6 kgf-cm

Main Unit Disassembly Process

Main Unit Disassembly Flowchart

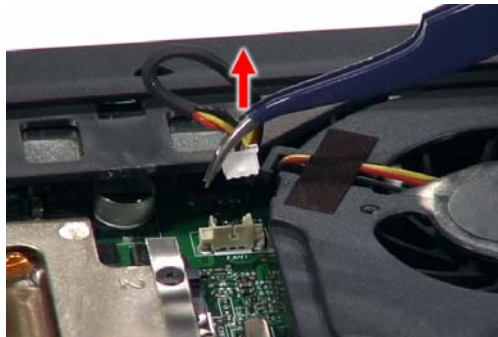


Screw List

	Screw	Part No.
A	M2 x L4	86.00G64.720
C	M2 x L3	86.9A552.3R0
D	M3 x L4	86.9A524.4R0
E	M2.5 x L6	86.00E33.736
G	M2 x L3	86.00C07.220
H	M2.5 x L5 (torque 1.6) M2.5 x L5 (torque 3.0)	86.00F87.735

Removing the Fan Module

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. Detach the heatsink cable.



5. Detach the tin foil tape on the fan.



6. Remove the screws (H) securing the fan to the main unit.



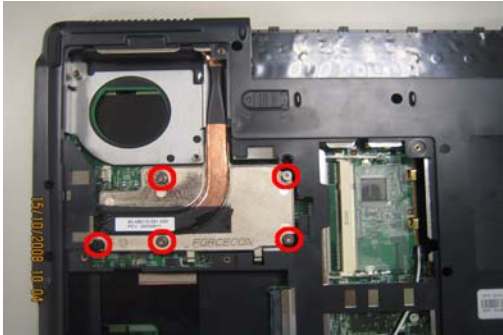
Step	Size (Quantity)	Color	Torque
1-2	M2.5 x L5 (2)	Black	1.6 kgf-cm

7. Remove the fan from the main unit.



Removing the CPU Heatsink Module

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Fan Module” on page 59.
4. Unfasten the screws (A) securing the heatsink in the order shown.



Step	Size (Quantity)	Color	Torque
1-5	M2 x L4 (5)	Silver	1.6 kgf-cm

5. Carefully pull the heatsink out of the edge of the main unit.

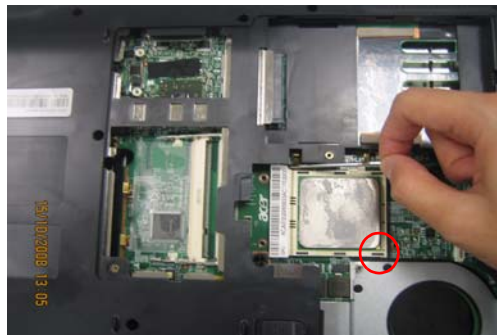


6. Remove the heatsink.



Removing the CPU

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Fan Module” on page 59.
4. See “Removing the CPU Heatsink Module” on page 60.
5. Press the CPU released lever to release the CPU then remove the CPU from the CPU socket.



NOTE: When installing the CPU, make sure to install the CPU with PIN 1 at the corner as shown.

IMPORTANT: To prevent any overheating problem, please apply some more thermal grease on the processor when you need to reattach the thermal module onto the processor. Thermal grease brand and model: Honeywell PCM45SP.

Removing the Middle Cover

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. See “Removing the Fan Module” on page 59.
5. See “Removing the CPU Heatsink Module” on page 60.
6. Open the LCD screen all the way to facilitate the easy removal of the middle cover.
7. Carefully insert the flat screwdriver under the side of the middle cover and gently pry up the middle cover.



8. Continue prying the middle cover until the full length of the cover releases from the main unit, then remove the cover.



Removing the Keyboard

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Middle Cover” on page 62.
- 3. Remove the two screws (G) securing the keyboard.

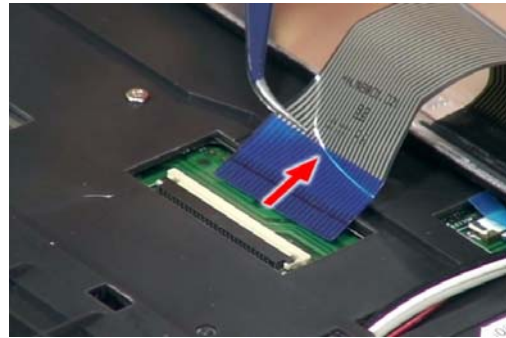
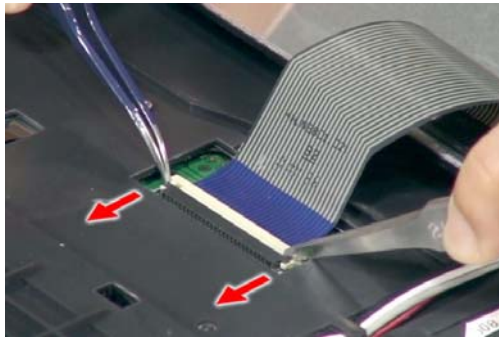


Step	Size (Quantity)	Color	Torque
1-2	M2 x L3 (2)	Silver	1.6 kgf-cm

- 4. Carefully pry up and out the keyboard and turn it over.

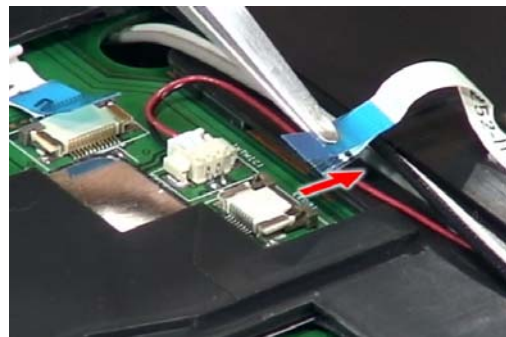
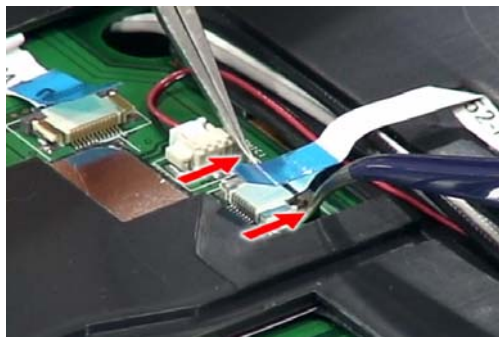


5. Disconnect the keyboard cable from the mainboard to remove the keyboard.

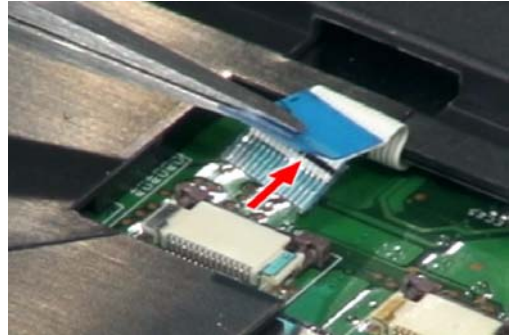
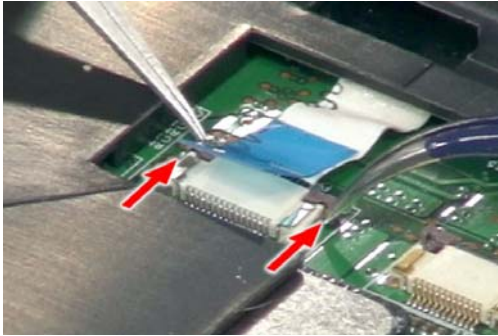


Removing the LCD Module

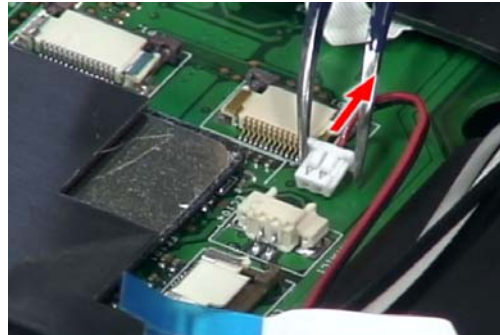
1. See "Removing the Battery Pack" on page 51.
2. See "Removing the Lower Cover" on page 51.
3. See "Removing the Lower Cover" on page 51.
4. See "Removing the Fan Module" on page 59.
5. See "Removing the CPU Heatsink Module" on page 60.
6. See "Removing the CPU" on page 61.
7. See "Removing the Middle Cover" on page 62.
8. See "Removing the Keyboard" on page 63.
9. Disconnect the LED cable.



10. Disconnect the touchpad cable.



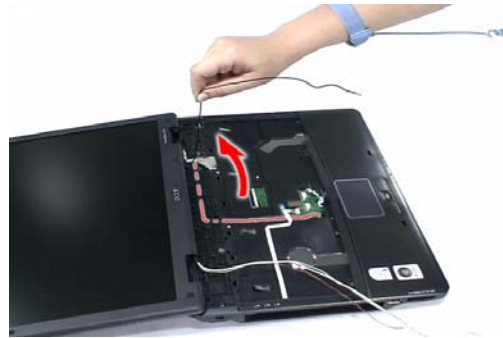
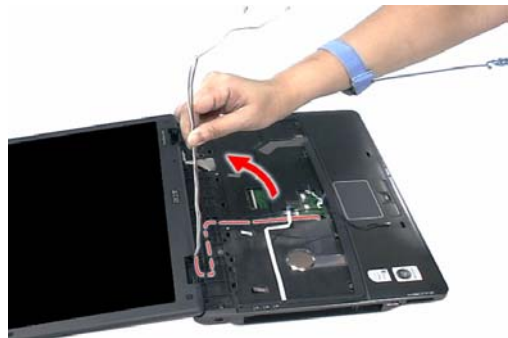
11. Disconnect the internal microphone cable.



12. Detach the mylar tape securing the mic and antenna cables to the upper case.



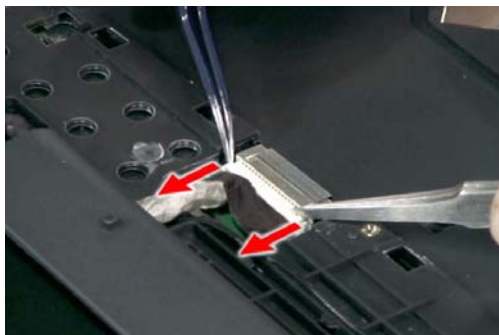
13. Carefully release the cables from the latches as shown.



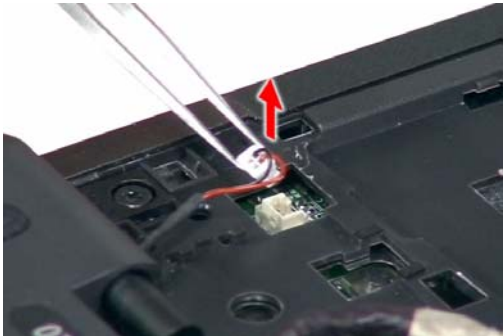
14. Detach the mylar tape from the LCD coaxial cable.



15. Disconnect the LCD coaxial cable from the mainboard.



16. Disconnect the cover switch cable from the mainboard.



17. Turn the system over and remove the two screws (E) from the base of the unit.



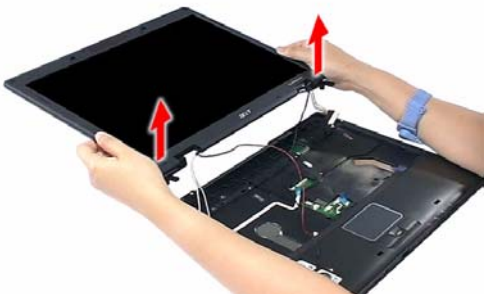
Step	Size (Quantity)	Color	Torque
1~2	M2.5 x L6 (2)	Black	3.0 kgf-cm

18. Remove the two screws (E) from the left and right hinge of the LCD module.



Step	Size (Quantity)	Color	Torque
1~2	M2.5 x L6 (2)	Black	3.0 kgf-cm

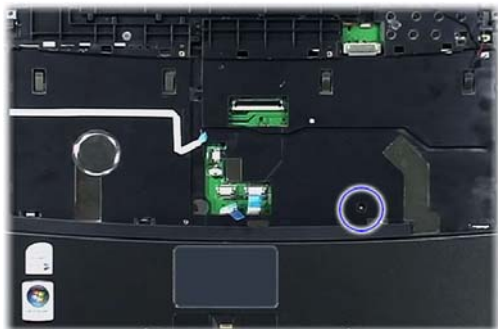
19. Carefully remove the LCD module from the base unit.



NOTE: Make sure the cables are routed well before connecting the cables back to the unit.

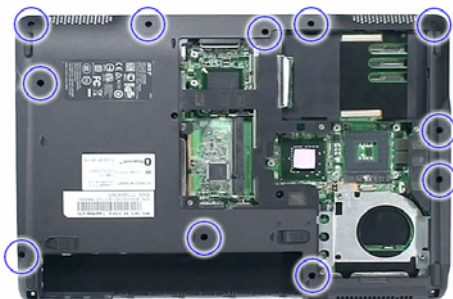
Separating the Upper Case from the Lower Case

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. See “Removing the Fan Module” on page 59.
- 5. See “Removing the CPU Heatsink Module” on page 60.
- 6. See “Removing the CPU” on page 61.
- 7. See “Removing the Middle Cover” on page 62.
- 8. See “Removing the Keyboard” on page 63.
- 9. See “Removing the LCD Module” on page 64.
- 10. Remove the screw (A) on the top panel.



Step	Size (Quantity)	Color	Torque
1	M2 x L4 (1)	Black	1.6 kgf-cm

- 11. Turn the system over and remove the 11 screws (E) on the bottom panel.



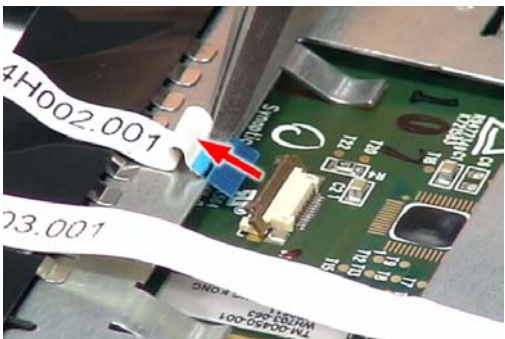
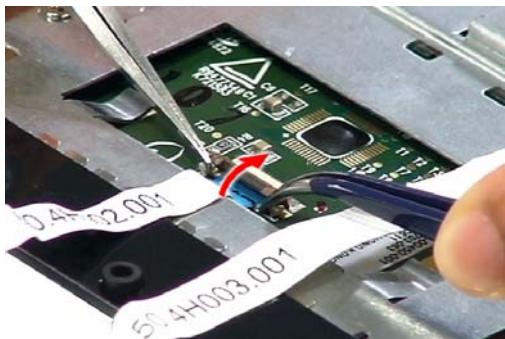
Step	Size (Quantity)	Color	Torque
1~11	M2.5 x L6 (11)	Black	3.0 kgf-cm

12. Gently detach the upper case from the lower case.

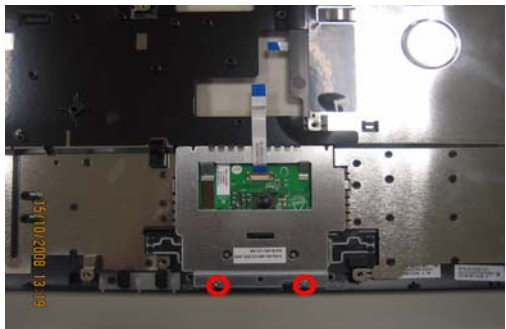


Removing the Touchpad Board Module

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. See “Removing the Fan Module” on page 59.
5. See “Removing the CPU Heatsink Module” on page 60.
6. See “Removing the CPU” on page 61.
7. See “Removing the Middle Cover” on page 62.
8. See “Removing the Keyboard” on page 63.
9. See “Removing the LCD Module” on page 64.
10. See “Separating the Upper Case from the Lower Case” on page 68.
11. Disconnect the touchpad cable from the touchpad board.



12. Remove the two screws (C) on the touchpad bracket.



Step	Size (Quantity)	Color	Torque
1~4	M2 x L3 (4)	Silver	1.6 kgf-cm

13. Detach the touchpad bracket from the upper case.



14. Carefully insert the flat screwdriver under the side of the touchpad board and gently pry up the board.



15. Continue prying the board until it releases from the upper case, then remove the board.



Removing the LED Indicators Board

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. See “Removing the Fan Module” on page 59.
- 5. See “Removing the CPU Heatsink Module” on page 60.
- 6. See “Removing the CPU” on page 61.
- 7. See “Removing the Middle Cover” on page 62.
- 8. See “Removing the Keyboard” on page 63.
- 9. See “Removing the LCD Module” on page 64.
- 10. See “Separating the Upper Case from the Lower Case” on page 68.
- 11. Remove the screw (G) on the LED indicators board.

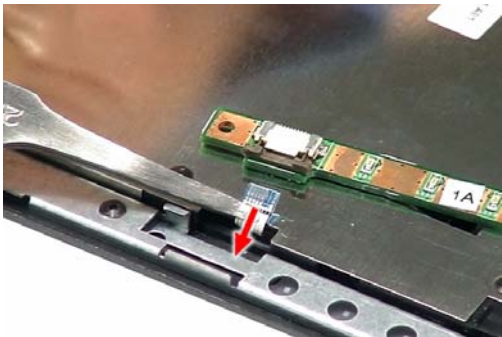
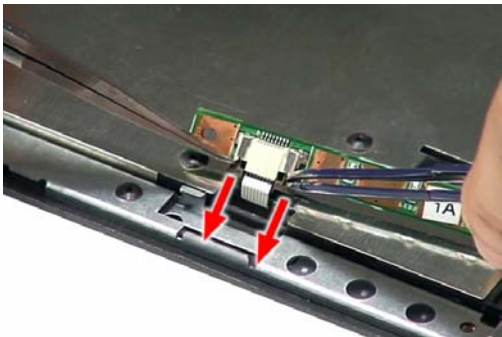


Step	Size (Quantity)	Color	Torque
1	M2 x L3 (1)	Silver	1.6 kgf-cm

- 12. Turn the LED board over, then detach the LED cable from the board.



- 13. Disconnect the LED board cable from the board, then remove the board.



Removing the Mainboard

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. See “Removing the Fan Module” on page 59.
- 5. See “Removing the CPU Heatsink Module” on page 60.
- 6. See “Removing the CPU” on page 61.
- 7. See “Removing the Middle Cover” on page 62.
- 8. See “Removing the Keyboard” on page 63.
- 9. See “Removing the LCD Module” on page 64.
- 10. See “Separating the Upper Case from the Lower Case” on page 68.
- 11. Remove the screw (A) holding the mainboard.



Step	Size (Quantity)	Color	Torque
1	M2 x L4 (1)	Silver	1.6 kgf-cm

- 12. Carefully detach the mainboard from the lower case.



NOTE: RTC battery has been highlighted with the red circle as above image shows. Please detach the RTC battery and follow local regulations for disposal.

-
13. Turn the mainboard over then disconnect the modem cable from modem board.



14. Disconnect the modem board cable from the mainboard.



Removing the Modem Board

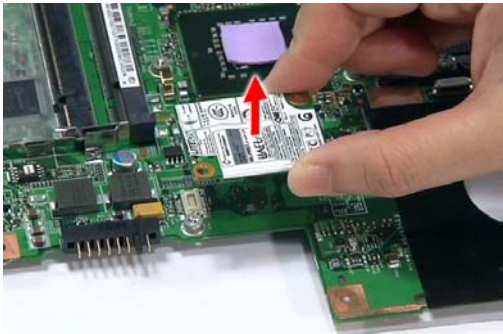
1. See "Removing the Battery Pack" on page 51.
2. See "Removing the Lower Cover" on page 51.
3. See "Removing the Lower Cover" on page 51.
4. See "Removing the Fan Module" on page 59.
5. See "Removing the CPU Heatsink Module" on page 60.
6. See "Removing the CPU" on page 61.
7. See "Removing the Middle Cover" on page 62.
8. See "Removing the Keyboard" on page 63.
9. See "Removing the LCD Module" on page 64.
10. See "Separating the Upper Case from the Lower Case" on page 68.
11. See "Removing the Mainboard" on page 72.

12. Remove the two screws (C) on the modem board.



Step	Size (Quantity)	Color	Torque
1~2	M2 x L3 (2)	Silver	1.6 kgf-cm

13. Detach the modem board from the mainboard.



Removing the Speaker Modules

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. See “Removing the Fan Module” on page 59.
5. See “Removing the CPU Heatsink Module” on page 60.
6. See “Removing the CPU” on page 61.
7. See “Removing the Middle Cover” on page 62.
8. See “Removing the Keyboard” on page 63.
9. See “Removing the LCD Module” on page 64.
10. See “Separating the Upper Case from the Lower Case” on page 68.
11. See “Removing the Mainboard” on page 72.

12. Remove the two screws (D) holding the left and right speaker modules to the lower case.



Step	Size (Quantity)	Color	Torque
1~2	M3xL4 (2)	Silver	3.0 kgf-cm

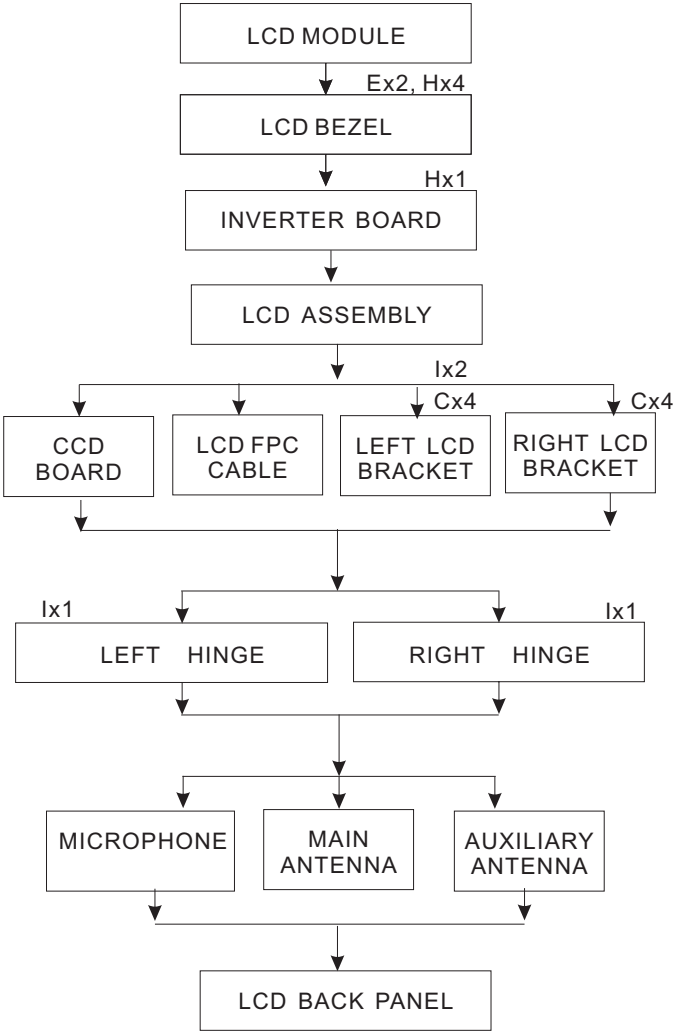
13. Carefully detach the speaker modules as shown.



LCD Module Disassembly Process

LCD Module Disassembly Flowchart

LCD MODULE DISASSEMBLY



Main Screw List

Item	Screw	Part No.
C	M2 x L3	86.9A552.3R0
E	M2.5 x L6	86.00E33.736
H	M2.5 x L5	86.00F87.735
I	M2.5 x L5	86.00F00.735

Removing the LCD Bezel

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. See “Removing the Fan Module” on page 59.
- 5. See “Removing the CPU Heatsink Module” on page 60.
- 6. See “Removing the CPU” on page 61.
- 7. See “Removing the Middle Cover” on page 62.
- 8. See “Removing the Keyboard” on page 63.
- 9. See “Removing the LCD Module” on page 64.
- 10. Remove the six rounded screw caps as shown.



- 11. Remove the six screws (Ex2, Hx4) on the LCD module in the order as shown.



Step	Size (Quantity)	Color	Torque
1~4	M2.5 x L5 (4)	Black	3.0 kgf-cm
5~6	M2.5 x L6 (2)	Black	3.0 kgf-cm

- 12. Carefully pry open the LCD bezel and remove the bezel from the LCD module.



Removing the Inverter Board

- 1. See “Removing the Battery Pack” on page 51.
- 2. See “Removing the Lower Cover” on page 51.
- 3. See “Removing the Lower Cover” on page 51.
- 4. See “Removing the Fan Module” on page 59.
- 5. See “Removing the CPU Heatsink Module” on page 60.
- 6. See “Removing the CPU” on page 61.
- 7. See “Removing the Middle Cover” on page 62.
- 8. See “Removing the Keyboard” on page 63.
- 9. See “Removing the LCD Module” on page 64.
- 10. See “Removing the LCD Bezel” on page 77.
- 11. Remove the screw (H) that hold the board to the panel.

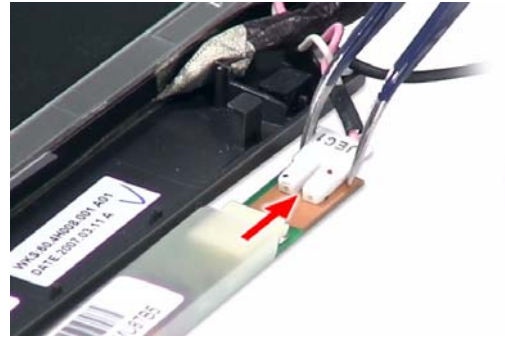


Step	Size (Quantity)	Color	Torque
1	M2.5 x L5 (1)	Black	3 kgf-cm

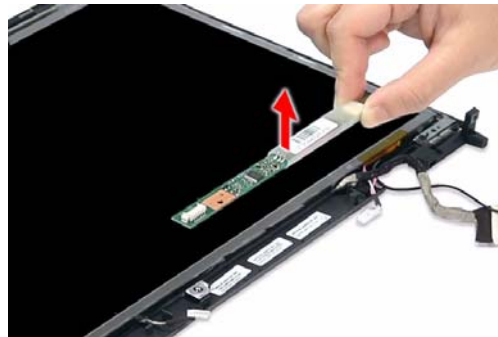
- 12. Turn the inverter board over.



13. Disconnect the inverter board cable from its connector, then disconnect the 2P cable on the inverter board.



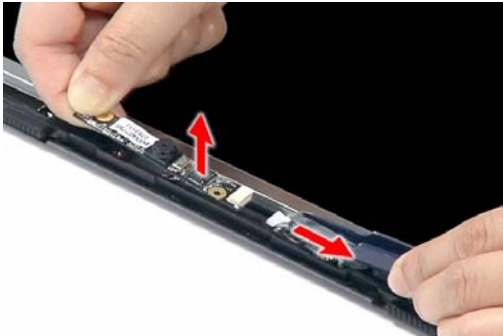
14. Remove the inverter board.



Removing the LCD with Brackets

1. See "Removing the Battery Pack" on page 51.
2. See "Removing the Lower Cover" on page 51.
- 3.
4. See "Removing the Lower Cover" on page 51.
5. See "Removing the Fan Module" on page 59.
6. See "Removing the CPU Heatsink Module" on page 60.
7. See "Removing the CPU" on page 61.
8. See "Removing the Middle Cover" on page 62.
9. See "Removing the Keyboard" on page 63.
10. See "Removing the LCD Module" on page 64.
11. See "Removing the LCD Bezel" on page 77.
12. See "Removing the Inverter Board" on page 78.

13. Detach the CCD board cable from the CCD board, then remove the board.

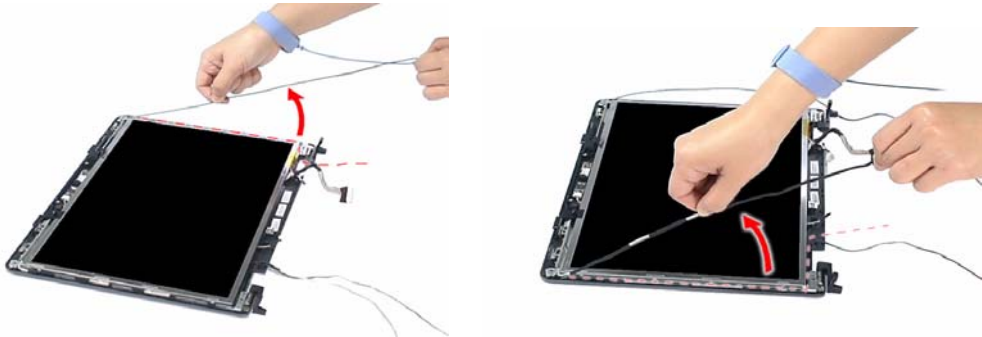


14. Remove the two screws (I) securing the left and right LCD brackets to the LCD back cover.



Step	Size (Quantity)	Color	Torque
1~2	M2.5 x L5 (2)	Silver	2.5 kgf-cm

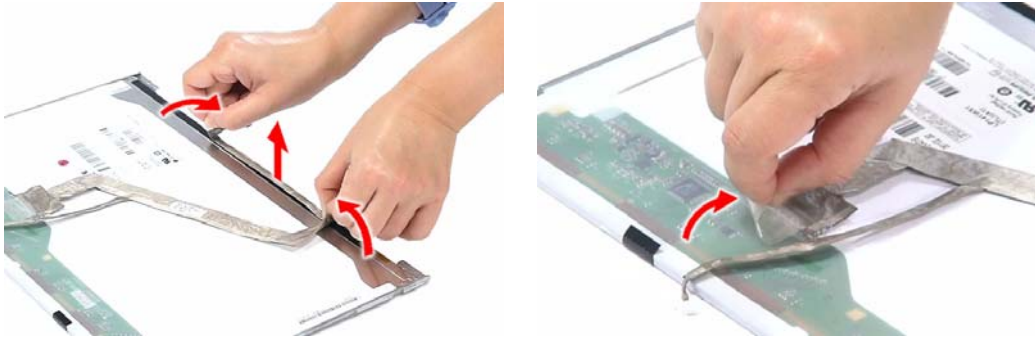
15. Carefully detach the cables from the latches on the LCD bracket as shown.



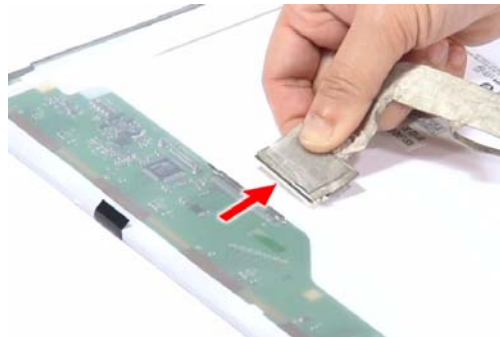
16. Detach the LCD with the brackets from the back cover.



-
17. Turn the LCD panel over, then detach the acetic tapes holding the FPC cable to the edge of the LCD panel and detach the acetic tape securing the FPC connector.



18. Disconnect the FPC cable from the LCD panel.



Removing the LCD Brackets

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. See “Removing the Fan Module” on page 59.
5. See “Removing the CPU Heatsink Module” on page 60.
6. See “Removing the CPU” on page 61.
7. See “Removing the Middle Cover” on page 62.
8. See “Removing the Keyboard” on page 63.
9. See “Removing the LCD Module” on page 64.
10. See “Removing the LCD Bezel” on page 77.
11. See “Removing the Inverter Board” on page 78.
12. See “Removing the LCD with Brackets” on page 79.

13. Remove the eight screws (C) securing the left and right LCD brackets to remove the brackets.



Step	Size (Quantity)	Color	Torque
1~8	M2 x L3 (8)	Silver	1.6 kgf-cm

Removing the LCD Module Hinges

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Lower Cover” on page 51.
4. See “Removing the Fan Module” on page 59.
5. See “Removing the CPU Heatsink Module” on page 60.
6. See “Removing the CPU” on page 61.
7. See “Removing the Middle Cover” on page 62.
8. See “Removing the Keyboard” on page 63.
9. See “Removing the LCD Module” on page 64.
10. See “Removing the LCD Bezel” on page 77.
11. See “Removing the Inverter Board” on page 78.
12. See “Removing the LCD with Brackets” on page 79.
13. See “Removing the LCD Brackets” on page 81.
14. Remove the two screws (I) securing the left and right LCD module hinges.



Step	Size (Quantity)	Color	Torque
1~2	M2.5 x L5 (2)	Black	2.5 kgf-cm

-
15. Remove the left and right hinges from the LCD back cover.



Removing the Antennas

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
- 3.
4. See “Removing the Lower Cover” on page 51.
5. See “Removing the Fan Module” on page 59.
6. See “Removing the CPU Heatsink Module” on page 60.
7. See “Removing the CPU” on page 61.
8. See “Removing the Middle Cover” on page 62.
9. See “Removing the Keyboard” on page 63.
10. See “Removing the LCD Module” on page 64.
11. See “Removing the LCD Bezel” on page 77.
12. See “Removing the Inverter Board” on page 78.
13. See “Removing the LCD with Brackets” on page 79.
14. Detach the gasket tape holding the right antenna in place, remove the antenna bracket, then carefully remove the antenna.



15. Detach the gasket tape holding the left antenna in place, remove the antenna bracket, then carefully remove the antenna.



Removing the Microphone

1. See “Removing the Battery Pack” on page 51.
2. See “Removing the Lower Cover” on page 51.
3. See “Removing the Express Dummy Card” on page 52.
4. See “Removing the Lower Cover” on page 51.
5. See “Removing the Fan Module” on page 59.
6. See “Removing the CPU Heatsink Module” on page 60.
7. See “Removing the CPU” on page 61.
8. See “Removing the Middle Cover” on page 62.
9. See “Removing the Keyboard” on page 63.
10. See “Removing the LCD Module” on page 64.
11. See “Removing the LCD Bezel” on page 77.
12. See “Removing the Inverter Board” on page 78.
13. See “Removing the LCD with Brackets” on page 79.
14. See “Removing the Antennas” on page 83.
15. Carefully remove the microphone cable from underneath the adhesive aluminum foil.



16. Remove the microphone.



Troubleshooting

Use the following procedure as a guide for computer problems.

NOTE: The diagnostic tests are intended to test only Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to recreate the failure by running the diagnostic tests or repeating the same operation.
3. Do not use any power sources when performing an assembly or disassembly procedures.
4. If any problems occur, you can perform the following visual inspection before you continue.
 - Power cords are properly connected and secured.
 - There are no obvious shorts or opens.
 - There are no burned or heated components.
 - All components appear normal.

System Check Procedures

External CD/DVD-ROM Drive Check

Perform the following procedures to isolate the possible problem a controller, drive, or CD-ROM.

NOTE: Make sure that the CD-ROM does not have any label attached to it. The label may damage the drive or cause drive failure.

1. Boot from the diagnostic disc and start the diagnostic programs.
2. See if CD-ROM Test is passed when the program runs the CD-ROM Test.
3. Follow onscreen instructions.

If an error occurs, reconnect the drive to the connector on the mainboard. If the error persists, do the following:

1. Reconnect the CD/DVD-ROM drive.
2. Replace the CD/DVD-ROM drive.
3. Replace the mainboard.

Keyboard or Auxiliary Input Device Check

Remove the external keyboard if the internal keyboard is to be tested.

If the internal keyboard does not work or an unexpected error occurs, make sure that the flexible cable extending from the internal keyboard is correctly connected to the mainboard. If the keyboard cable connection is correct, run the Keyboard Test.

If the tests detect a keyboard problem, do the following procedures in sequence to correct the problems. Do not replace a non-defective FRU:

1. Reconnect the keyboard cable.
2. Replace the keyboard.
3. Replace the mainboard.

The following auxiliary input devices are supported by this computer:

- Numeric keypad
- External keyboard

If any of these devices do not function, reconnect the cable and repeat above procedures.

Memory Check

NOTE: Make sure that the DIMM is properly installed into the connector. A loose connection can cause an error.

Do the following:

1. Boot from the diagnostic diskette and start the diagnostic program.
2. Go to the diagnostic memory in the test items.
3. Press **F2** in the test items.
4. Follow onscreen instructions.

Power System Check

Do the following:

1. Remove the battery pack.
2. Connect the power adapter and check the power supply.
3. Disconnect the power adapter and install the battery pack; then check that power supply.

If you suspect a power problem, see the appropriate power supply check in the following list:

- “Check the Power Adapter” on page 89
- “Check the Battery Pack” on page 89

Check the Power Adapter

Unplug the power adapter cable from the system and measure the output voltage at the plug of the power adapter cable.

1. If the voltage is not correct, replace the power adapter.
2. If the voltage is within range, do the following:
 - a. Replace the System board.
 - b. If the problem is not resolved, see “Undetermined Problems” on page 103.
 - c. If the voltage is not correct, go to the next step.

NOTE: An audible noise from the power adapter does not always indicate a defect.

3. If the power-on indicator does not light up, check if the adapter’s power cord is properly connected to the system.
4. If the operational charge does not work, see “Check the Battery Pack” on page 89.

Check the Battery Pack

Do the following:

Using the software to identify whether a problem occurs while the battery pack during recharge or discharge:

1. Open Power Management in the Control Panel.
2. In Power Meter, confirm if the parameters for Current Power Source and Total Battery Power Remaining are correct.
3. Repeat the steps 1 and 2 for both battery and adapter.

Using the hardware to identify whether you should replace the battery pack or not:

1. Power off the system.
2. Remove the battery pack and measure the voltage between terminals one (+) and seven (-). There are seven terminals totally.
3. If the voltage is still less than 7.5 Vdc after recharging, replace the battery.

If the battery status indicator does not light up, remove the battery pack . If the charge indicator still does not light up, replace the AC/DC charger board.

Touchpad Check

If the touchpad doesn't work, do the following procedures in sequence to correct the problem. Do not replace a non-defective FRU:

1. After rebooting, run Tracking Pad PS2 Mode Driver. For example Syn touch driver.
2. Run utility with the PS/2 mouse function and check if the mouse is working.
3. If the PS/2 mouse does not work, then check if the main board to switch board FPC is connected properly.
4. If the main board to switch board FPC is connected correctly, then check if the FFC on the touch pad PCB is connected properly.
5. If the FFC on the touch pad PCB is connected correctly, check if LS851 JP1 Pin6 = 5V are pulses. If yes, then replace switch board. If not, then go to the next step.
6. Replace the touch pad PCB.
7. If the touch pad still does not work, then replace the FPC on Track Pad PCB.

After you use the touchpad, the pointer drifts on the screen for a short time. This self-acting pointer movement will occur when a slight, steady pressure is applied to the touchpad pointer. This symptom is not a hardware problem. No actions are necessary to be taken if the pointer movement stops in a short period of time.

Power-On Self-Test (POST) Error Message

The POST error message index lists the error message and their possible causes.

NOTE: Perform the FRU replacement or actions in the sequence shown in FRU/Action column, if the FRU replacement does not solve the problem, put the original part back in the computer. Do not replace a non-defective FRU.

The error messages are listed in the coming pages to indicate the BIOS signals on the screen and the error symptoms classified by functions. If the symptom is not included on the list, please refer to “Undetermined Problems”.

NOTE: Most of the error messages occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured.

NOTE: If the system fails after you make changes in the BIOS Setup Utility menus, reset the computer, enter Setup and install Setup defaults or correct the error.

Index of Error Messages

Error Message List

Error Messages	Check or do the following in sequence:
Stuck Key	See "Keyboard or Auxiliary Input Device Check" on page 88.
System CMOS checksum bad - Default configuration used	<ul style="list-style-type: none"> • RTC battery. • Run the BIOS Setup Utility to reconfigure the system time, then reboot system.
Real time clock error	<ul style="list-style-type: none"> • RTC battery • Run the BIOS Setup Utility to reconfigure system time, then reboot system. • Mainboard
Previous boot incomplete - Default configuration used	<ul style="list-style-type: none"> • Run "Load Setup Defaults" in BIOS Setup Utility. • RTC battery • Mainboard
Invalid System Configuration Data	<ul style="list-style-type: none"> • Run "Load Setup Defaults" in BIOS Setup Utility. • Mainboard
Operating system not found	<ul style="list-style-type: none"> • Run the BIOS Setup Utility to check if the fixed disk and drive A are properly identified. • CD/DVD-ROM drive • Hard disk drive • Mainboard
Power-on indicator turns off and LCD is blank.	<ul style="list-style-type: none"> • Power source (battery pack and power adapter.) See "Power System Check" on page 89. • Ensure every connector is connected tightly and correctly. • Reconnect the DIMM • Mainboard
Power-on indicator turns on and LCD is blank.	<ul style="list-style-type: none"> • Power source (battery pack and power adapter.) See "Power System Check" on page 89. • Reconnect the LCD connector • Hard disk drive • LCD cable • LCD inverter • LCD • Mainboard
Power-on indicator turns on and LCD is blank. But you can see POST on an external CRT.	<ul style="list-style-type: none"> • Reconnect the LCD connectors. • LCD cable • LCD inverter • LCD • Mainboard
Power-on indicator turns on and a blinking cursor shown on LCD during POST.	<ul style="list-style-type: none"> • Ensure every connector is connected tightly and correctly. • Mainboard
Failure Fixed Disk	<ul style="list-style-type: none"> • Reconnect the hard disk drive connector. • Run "Load Setup Defaults" in BIOS Setup Utility. • Hard disk drive • Mainboard

Error Message List

Error Messages	Check or do the following in sequence:
No beep, power-on indicator turns off and LCD is blank.	<ul style="list-style-type: none">• Power source (battery pack and power adapter). See “Power System Check” on page 89.• Ensure every connector is connected tightly and correctly.• Reconnect the DIMM.• LED board• Mainboard
No beep, power-on indicator turns on and LCD is blank.	<ul style="list-style-type: none">• Power source (battery pack and power adapter). See “Power System Check” on page 89.• Reconnect the LCD connector• Hard disk drive• LCD inverter ID• LCD cable• LCD Inverter• LCD• Mainboard
No beep, power-on indicator turns on and LCD is blank. But you can see POST on an external CRT.	<ul style="list-style-type: none">• Reconnect the LCD connectors.• LCD inverter ID• LCD cable• LCD inverter• LCD• Mainboard
No beep, power-on indicator turns on and a blinking cursor shown on LCD during POST.	<ul style="list-style-type: none">• Ensure every connector is connected tightly and correctly.• Mainboard
No beep during POST but system runs correctly.	<ul style="list-style-type: none">• Speaker• Mainboard

Phoenix BIOS Beep Codes

Code	Beeps	POST Routine Description
02h		Verify Real Mode
03h		Disable Non-Maskable Interrupt (NMI)
04h		Get CPU type
06h		Initialize system hardware
08h		Initialize chipset with initial POST values
09h		Set IN POST flag
0Ah		Initialize CPU registers
0Bh		Enable CPU cache
0Ch		Initialize caches to initial POST values
0Eh		Initialize I/O component
0Fh		Initialize the local bus IDE
10h		Initialize Power Management
11h		Load alternate registers with initial POST values
12h		Restore CPU control word during warm boot
13h		Initialize PCI Bus Mastering devices
14h		Initialize keyboard controller
16h	1-2-2-3	BIOS ROM checksum
17h		Initialize cache before memory autosize
18h		8254 timer initialization
1Ah		8237 DMA controller initialization
1Ch		Reset Programmable Interrupt Controller
20h	1-3-1-1	Test DRAM refresh
22h	1-3-1-3	Test 8742 Keyboard Controller
24h		Set ES segment register to 4 GB
26h		Enable A20 line
28h		Autosize DRAM
29h		Initialize POST Memory Manager
2Ah		Clear 215 KB base RAM
2Ch	1-3-4-1	RAM failure on address line xxxx*
2Eh	1-3-4-3	RAM failure on data bits xxxx* of low byte of memory bus
2Fh		Enable cache before system BIOS shadow
30h	1-4-1-1	RAM failure on data bits xxxx* of high byte of memory bus
32h		Test CPU bus-clock frequency
33h		Initialize Phoenix Dispatch Manager
36h		Warm start shut down
38h		Shadow system BIOS ROM
3Ah		Autosize cache
3Ch		Advanced configuration of chipset registers
3Dh		Load alternate registers with CMOS values
42h		Initialize interrupt vectors
45h		POST device initialization

Code	Beeps	POST Routine Description
46h	2-1-2-3	Check ROM copyright notice
48h		Check video configuration against CMOS
49h		Initialize PCI bus and devices
4Ah		Initialize all video adapters in system
4Bh		QuietBoot start (optional)
4Ch		Shadow video BIOS ROM
4Eh		Display BIOS copyright notice
50h		Display CPU type and speed
51h		Initialize EISA board
52h		Test keyboard
54h		Set key click if enabled
58h	2-2-3-1	Test for unexpected interrupts
59h		Initialize POST display service
5Ah		Display prompt "Press F2 to enter SETUP"
5Bh		Disable CPU cache
5Ch		Test RAM between 512 and 640 KB
60h		Test extended memory
62h		Test extended memory address lines
64h		Jump to User Patch1
66h		Configure advanced cache registers
67h		Initialize Multi Processor APIC
68h		Enable external and CPU caches
69h		Setup System Management Mode (SMM) area
6Ah		Display external L2 cache size
6Bh		Load custom defaults (optional)
6Ch		Display shadow-area message
6Eh		Display possible high address for UMB recovery
70h		Display error messages
72h		Check for configuration errors
76h		Check for keyboard errors
7Ch		Set up hardware interrupt vectors
7Eh		Initialize coprocessor if present
80h		Disable onboard Super I/O ports and IRQs
81h		Late POST device initialization
82h		Detect and install external RS232 ports
83h		Configure non-MCD IDE controllers
84h		Detect and install external parallel ports
85h		Initialize PC-compatible PnP ISA devices
86h		Re-initialize onboard I/O ports
87h		Configure Motherboard Configurable Devices (optional)
88h		Initialize BIOS Data Area
89h		Enable Non-Maskable Interrupts (NMI)

Code	Beeps	POST Routine Description
8Ah		Initialize Extended BIOS Data Area
8Bh		Test and initialize PS/2 mouse
8Ch		Initialize floppy controller
8Fh		Determine number of ATA drives (optional)
90h		Initialize hard-disk controllers
91h		Initialize local-bus hard-disk controllers
92h		Jump to UserPatch2
93h		Build MPTABLE for multi-processor boards
95h		Install CD-ROM for boot
96h		Clear huge ES segment register
97h		Fixup Multiprocessor table
98h	1-2	Search for option ROMs. One long, two short beeps on checksum failure.
99h		Check for SMART drive (optional)
9Ah		Shadow option ROMs
9Ch		Set up Power Management
9Dh		Initialize security engine (optional)
9Eh		Enable hardware interrupts
9Fh		Determine number of ATA and SCSI drives
A0h		Set time of day
A2h		Check key lock
A4h		Initialize Typematic rate
A8h		Erase F2 prompt
AAh		Scan for F2 key stroke
ACH		Enter SETUP
Aeh		Clear Boot flag
B0h		Check for errors
B2h		POST done- prepare to boot operating system
B4h	1	One short beep before boot
B5h		Terminate QuietBoot (optional)
B6h		Check password (optional)
B9h		Prepare Boot
BAh		Initialize DMI parameters
BBh		Initialize PnP Option ROMs
BCh		Clear parity checkers
BDh		Display MultiBoot menu
BEh		Clear screen (optional)
BFh		Check virus and backup reminders
C0h		Try to boot with INT 19
C1h		Initialize POST Error Manager (PEM)
C2h		Initialize error logging
C3h		Initialize error display function

Code	Beeps	POST Routine Description
C4h		Initialize system error handler
C5h		PnPnd dual CMOS (optional)
C6h		Initialize notebook docking (optional)
C7h		Initialize notebook docking late
C8h		Force check (optional)
C9h		Extended checksum (optional)
D2h		Unknown interrupt

* If the BIOS detects error 2C, 2E, or 30 (base 512K RAM error), it displays an additional word-bitmap (xxxx) indicating the address line or bits that failed. For example, "2C 0002" means address line 1 (bit one set) has failed. "2E 1020" means data bits 12 and 5 (bits 12 and 5 set) have failed in the lower 16 bits. Note that error 30 cannot occur on 386SX systems because they have a 16 rather than 32-bit bus. The BIOS also sends the bitmap to the port-80 LED display. It first displays the check point code, followed by a delay, the high-order byte, another delay, and then the low-order byte of the error. It repeats this sequence continuously.

BIOS Beep Codes for Boot Block in Flash ROM

Code	Beeps	For Boot Block in Flash ROM
E0h		Initialize the chipset
E1h		Initialize the bridge
E2h		Initialize the CPU
E3h		Initialize the system timer
E4h		Initialize system I/O
E5h		Check force recovery boot
E6h		Checksum BIOS ROM
E7h		Go to BIOS
E8h		Set Huge Segment
E9h		Initialize Multiprocessor
EAh		Initialize OEM special code
EBh		Initialize PIC and DMA
ECh		Initialize Memory type
EDh		Initialize Memory size
EEh		Shadow Boot Block
EFh		System memory test
F0h		Initialize interrupt vectors
F1h		Initialize Run Time Clock
F2h		Initialize video
F3h		Initialize System Management Mode
F4h	1	Output one beep before boot
F5h		Boot to Mini DOS
F6h		Clear Huge Segment
F7h		Boot to Full DOS

Index of Symptom-to-FRU Error Message

LCD-Related Symptoms

Symptom / Error	Check or do the following in sequence
LCD backlight doesn't work LCD is too dark LCD brightness cannot be adjusted LCD contrast cannot be adjusted	<ul style="list-style-type: none">• Run "Load Setup Defaults" in BIOS Setup Utility, then reboot system.• Reconnect the LCD connectors.• Keyboard (if contrast and brightness function key doesn't work).• LCD inverter ID• LCD cable• LCD inverter• LCD• Mainboard
Unreadable LCD screen Missing pels in characters Abnormal screen Wrong color displayed	<ul style="list-style-type: none">• Reconnect the LCD connector• LCD inverter ID• LCD cable• LCD inverter• LCD• Mainboard
LCD has extra horizontal or vertical lines displayed.	<ul style="list-style-type: none">• LCD inverter ID• LCD inverter• LCD cable• LCD• Mainboard

Indicator-Related Symptoms

Symptom / Error	Check or do the following in sequence
Indicator incorrectly remains off or on, but system runs correctly	<ul style="list-style-type: none">• Reconnect the inverter board.• Mainboard

Power-Related Symptoms

Symptom / Error	Check or do the following in sequence
Power shuts down during operation	<ul style="list-style-type: none">• Power source (battery pack and power adapter). See "Power System Check" on page 89.• Battery pack• Power adapter• Hard disk drive & battery connection board• Mainboard
The system doesn't power-on.	<ul style="list-style-type: none">• Power source (battery pack and power adapter). See "Power System Check" on page 89.• Battery pack• Power adapter• Hard disk drive & battery connection board• Mainboard

Power-Related Symptoms

Symptom / Error	Check or do the following in sequence
The system doesn't power-off.	<ul style="list-style-type: none">• Power source (battery pack and power adapter). See "Power System Check" on page 89.• Hold and press the power switch for more than 4 seconds.• Mainboard
Battery can't be charged	<ul style="list-style-type: none">• See "Check the Battery Pack" on page 89.• Battery pack• Mainboard

PCMCIA-Related Symptoms

Symptom / Error	Check or do the following in sequence
System cannot detect the PC Card (PCMCIA)	<ul style="list-style-type: none">• PCMCIA slot assembly• Mainboard
PCMCIA slot pin is damaged.	PCMCIA slot assembly

Memory-Related Symptoms

Symptom / Error	Check or do the following in sequence
Memory count (size) appears different from actual size.	<ul style="list-style-type: none">• Run "Load Setup Defaults" in BIOS Setup Utility, then reboot system.• DIMM• Mainboard

Speaker-Related Symptoms

Symptom / Error	Check or do the following in sequence
In Windows, multimedia programs, no sound comes from the computer.	<ul style="list-style-type: none">• Audio driver• Speaker• Mainboard
Internal speakers make noise or emit no sound.	<ul style="list-style-type: none">• Speaker• Mainboard

Power Management-Related Symptoms

Symptom / Error	Check or do the following in sequence
The system will not enter hibernation	<ul style="list-style-type: none">• Keyboard (if control is from the keyboard)• Hard disk drive• Mainboard
The system doesn't enter hibernation mode and four short beeps every minute.	<ul style="list-style-type: none">• Press Fn+0 and see if the computer enters hibernation mode.• Touchpad• Keyboard• Hard disk connection board• Hard disk drive• Mainboard
The system doesn't enter standby mode after closing the LCD	<ul style="list-style-type: none">• LCD cover switch• Mainboard
The system doesn't resume from hibernation mode.	<ul style="list-style-type: none">• Hard disk connection board• Hard disk drive• Mainboard

Power Management-Related Symptoms

Symptom / Error	Check or do the following in sequence
The system doesn't resume from standby mode after opening the LCD.	<ul style="list-style-type: none">• LCD cover switch• Mainboard
Battery fuel gauge in Windows doesn't go higher than 90%.	<ul style="list-style-type: none">• Remove battery pack and let it cool for 2 hours.• Refresh battery (continue use battery until power off, then charge battery).• Battery pack• Mainboard
System hangs intermittently.	<ul style="list-style-type: none">• Reconnect hard disk/CD-ROM drives.• Hard disk connection board• Mainboard

Peripheral-Related Symptoms

Symptom / Error	Check or do the following in sequence
System configuration does not match the installed devices.	<ul style="list-style-type: none">• Run "Load Setup Defaults" in BIOS Setup Utility, then reboot system.• Reconnect hard disk/CD-ROM/diskette drives.
External display does not work correctly.	<ul style="list-style-type: none">• Press Fn+F5 to switch to LCD or CRT• Mainboard
USB does not work correctly	<ul style="list-style-type: none">• Mainboard
Print problems.	<ul style="list-style-type: none">• Run printer self-test.• Printer driver• Printer cable• Printer• Mainboard

Keyboard/Touchpad-Related Symptoms

Symptom / Error	Check or do the following in sequence
Keyboard (one or more keys) does not work.	<ul style="list-style-type: none">• Reconnect the keyboard cable.• Keyboard• Mainboard
Touchpad does not work.	<ul style="list-style-type: none">• Reconnect touchpad cable.• Touchpad board• Mainboard

Modem-Related Symptoms

Symptom / Error	Check or do the following in sequence
Internal modem does not work correctly.	<ul style="list-style-type: none">• Modem phone port• Modem combo board• Mainboard

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see “Undetermined Problems” on page 103.

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, do the following:

1. Run the advanced diagnostic test for the mainboard in loop mode at least 10 times.
2. If no error is detected, do not replace any FRU.
3. If any error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

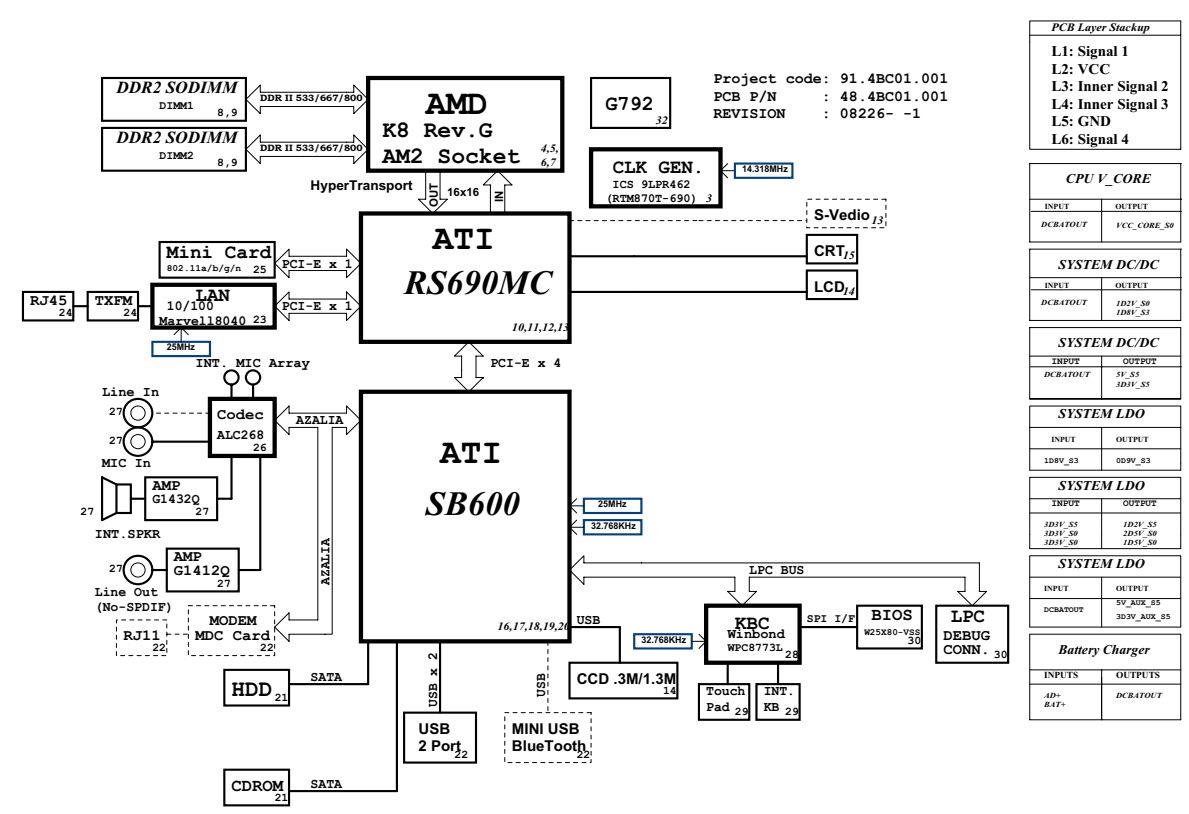
NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 89.)

Follow procedures below to isolate the failing FRU. Do not isolate non-defective FRU.

1. Power off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
 - Non-Acer devices
 - Printer, mouse, and other external devices
 - Battery pack
 - Hard disk drive
 - DIMM
 - CD/DVD-ROM drive
 - PC cards
4. Power on the computer.
5. Determine if the problem has been resolved.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failed FRU.
7. If the problem persists, replace the following FRU one at a time. Do not replace a non-defective FRU.
 - System board
 - LCD assembly

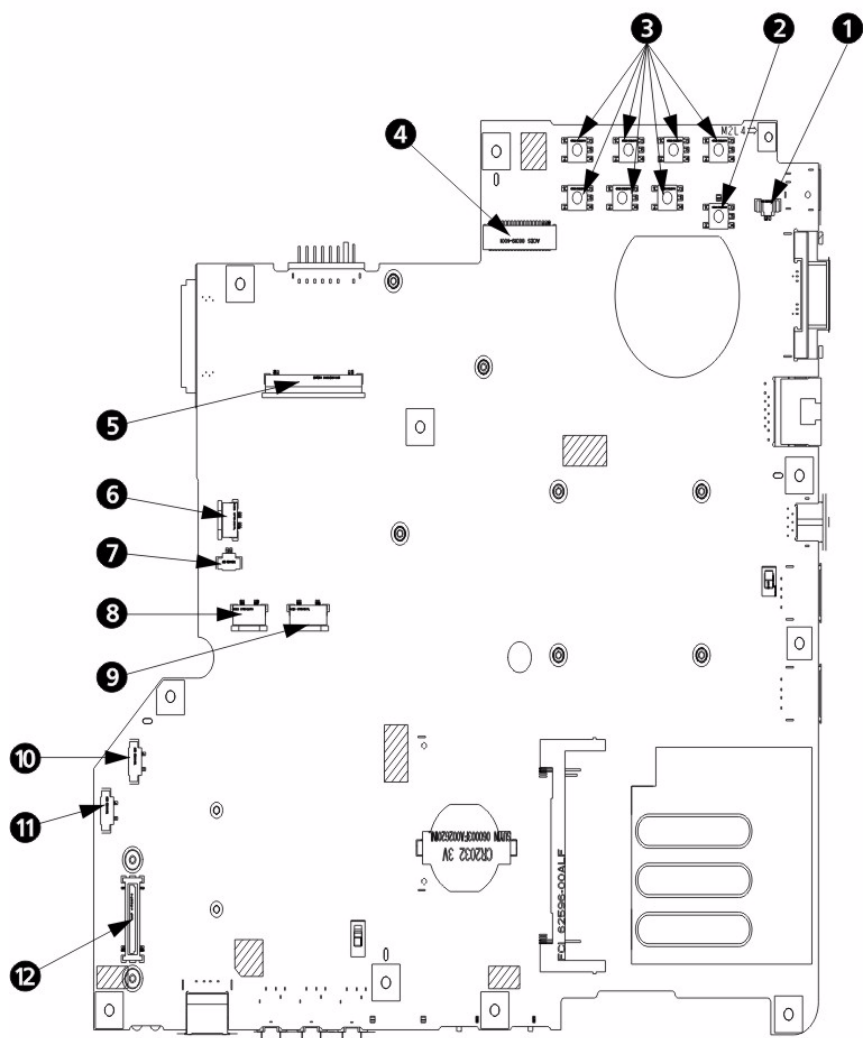
System Block Diagram

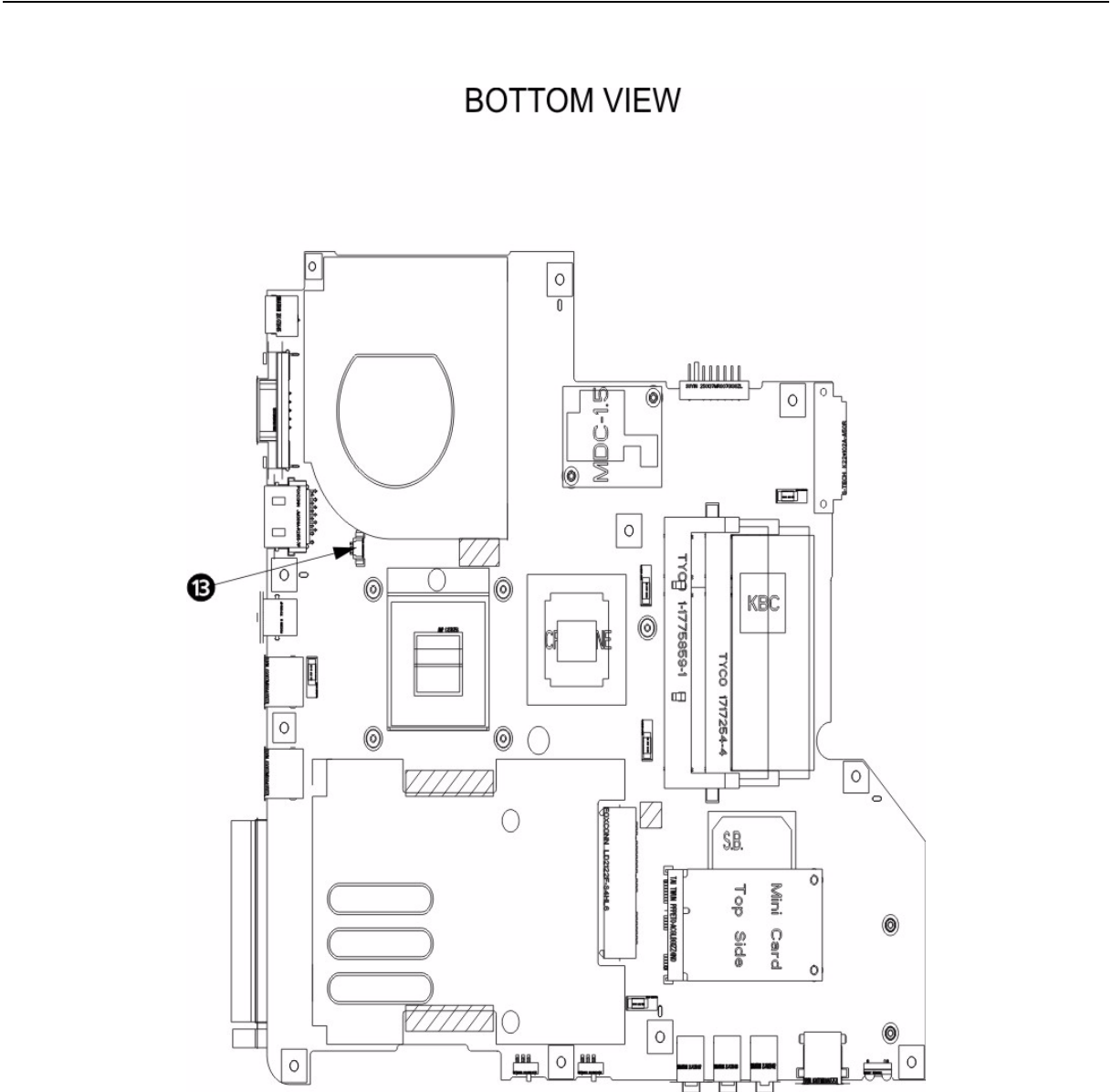


Board Layout

Top and Bottom View

TOP VIEW





- | | | | |
|---|----------------------------|----|---|
| 1 | Lid switch connector | 8 | Fingerprint board connector (not available on this model) |
| 2 | Power key switch | 9 | Touchpad board connector |
| 3 | Launch key switch | 10 | Bluetooth cable connector (not available on this model) |
| 4 | LCD cable connector | 11 | Speaker cable connector |
| 5 | Keyboard connector | 12 | Daughter board connector (not available on this model) |
| 6 | LED board connector | 13 | System fan connector |
| 7 | Microphone cable connector | | |

Standard Operation Procedures of Password Bypassing and BIOS Recovery

For RD and CSD to debug easily, the system provide one hardware open gap for bypassing password check, and one hotkey to enable BIOS recovery. As to BIOS recovery, except for BIOS recovery hotkey, you can also use crisis disk to restore BIOS.

1. Hardware open gap:

Gap	Description
G41	Bypassing Password Check

RD/CSD can enable or disable this function by shorting the gap. The gap is located as shown.



2. Hotkey to enable BIOS Recovery: **Fn+ESC**, then Power Button. To use this function, it is strongly recommended that the AC adapter is connected to the system and plug-in to a wall outlet and the Battery is also in the system

3. Restore BIOS by the Crisis Disk

Enable this function by pressing the combination: **Fn+ESC**, and pressing the **Power Button**. To use this function, it is strongly recommended that the AC adapter is connected to the system and plug-in to a wall outlet and the Battery is also in the system. If this function is enabled, the system will force the BIOS to enter a special BIOS block, called BootBlock. RD/CSD can use this special BIOS code to recover the BIOS to a successful one if previous BIOS flashing process fails. However, before doing this, one Crisis Disk should be prepared in WinXP. Detailed steps are as the followings:

- a. Prepare the Crisis Disk in WinXP.
- b. Insert the Crisis Disk to a USB floppy drive which is attached to the failed machine.
- c. While the system is turned off, press and hold **Fn+ESC**, then press **Power Button**. The system should be powered on with Crisis Recovery process.
- d. BootBlock BIOS starts to restore the failed BIOS code. Short beeps should be heard when flashing.
- e. If the flashing process is finished, a long beep should be heard.
- f. Power down the system after you hear the long beep.

If the crisis recovery process is finished, the system should be powered on with the successful BIOS. RD/CSD can then update the BIOS to a workable one by regular BIOS flashing process.

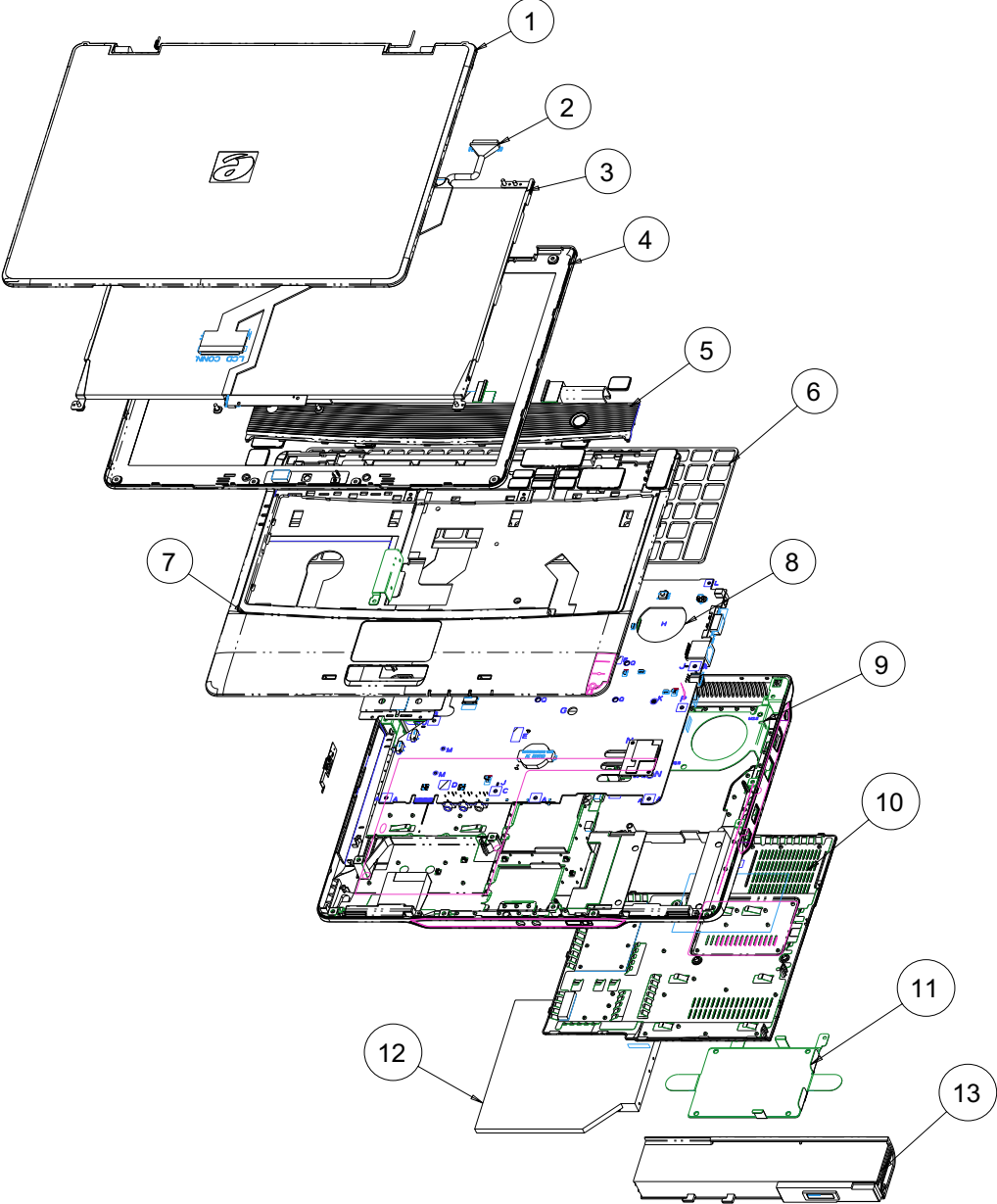
FRU (Field Replaceable Unit) List

This chapter offers the FRU (Field Replaceable Unit) list in global configuration of eMachines D620. Refer to this chapter whenever ordering the parts to repair or for RMA (Return Merchandise Authorization).


NOTE: When ordering FRU parts, check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed Service Guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. You **MUST** use the local FRU list provided by your regional Acer office to order FRU parts for service.

NOTE: To scrap or to return the defective parts, follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

eMachines D620 Exploded Diagram




eMachines D620 FRU List

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
ADAPTER				
1	N/A	ADAPTER 65W DELTA SADP-65KB DFA LF LEVEL-4	ADT 65W SADP-65KB DFA LF DELTA	AP.06501.013
1	N/A	ADAPTER 65W LITEON PA-1650-02AC LF LEVEL-4	ADT 65W PA-1650-02AC LF	AP.06503.016
1	N/A	ADAPTER 65W HIPRO HP-OK065B13 LF LEVEL-4	ADP 65W 3P HP-OK065B13LF	AP.0650A.010
1	N/A	ADAPTER 65W 3PIN DELTA SADP-65KB BFJA LF LEVEL-4 FOR OBL ONLY	ADP 65W 3P SADP-65KB BFJA DELT	AP.06501.014
BATTERY				
1	13	BATTERY SANYO TM-2007A LI-ION 3S2P SANYO 6 CELL 4400MAH MAIN COMMON NORMAL TYPE	BTY PACK LI+ 6C 2.2AH SANYO	BT.00603.044
1	13	BATTERY SONY TM-2007A LI-ION 3S2P SONY 6 CELL 4400MAH MAIN COMMON NORMAL TYPE	BTY PACK LI+ 6C 2.2AH SONY	BT.00604.027
1	13	BATTERY PANASONIC TM-2007A LI-ION 3S2P PANASONIC 6 CELL 4400MAH MAIN COMMON PSS	BTY PACK LI+ 6C 2.2AH PANA	BT.00605.024
1	13	BATTERY SIMPLO TM-2007A LI-ION 3S2P PANASONIC 6 CELL 4400MAH MAIN COMMON PSS	BTY PACK PANA LI+ 6C 2.2AH SMP	BT.00607.018
BOARD				
	N/A	LED BOARD	YUKON LED BD 06576-1(D)	55.N2401.001
	N/A	TOUCHPAD BOARD ALPS KGDFC0025A	TOUCHPAD ALPS KGDFC0025A	56.N2401.001
	N/A	TOUCHPAD BOARD SYNAPTICS TM00450-001	TOUCHPAD SYNAPTICS TM00450-001	56.TK501.001

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	MINI WLAN/B FOXCONN 802.11BGN ATHEROS XB63 BG T60H976.00 FW:V06 MINICARD	WLAN 802.11BG ATHEROS REV06	NI.23600.007
	N/A	WIRELESS LAN BOARD 802.11BGN FOXCONN BCM4312 T77H030.00 MINICARD	WLAN 802.11BG BCM4312 MINICARD	NI.23600.029
CABLE				
	N/A	POWER CORD 10A 125V US	CODE US 7A 125V BK	27.T30V1.001
	N/A	POWER CORD 10A 125V 3PIN US BK	CODE 10A 125V 3P US BK	27.01518.641
	N/A	POWER CORD 2.5A 125V USA	CORD USA/W CNS 2.5A 125V 8121-	27.01518.781
	N/A	POWER CORD 3A 250V 3PIN UK	CODE UK 2.5A 250V 3P BK	27.01518.541
	N/A	POWER CORD 5A 250V 3PIN UK BK	CODE 5A 250V 3P UK BK	27.03118.001
	N/A	POWER CORD 250V 3PIN EUR BK	CORD EUR 250V 3P BK	27.T30V1.004
	N/A	POWER CABLE 16A 250V 3PIN EUR BK	CORD 16A 250V 3P EUR BK	27.01518.731
	N/A	POWER CORD 10A 3PIN BK DENMARK	CODE DENMARK 2.5A 250V 3P BK	27.01518.561
	N/A	POWER CORD 10A 250V 3PIN DENMARK BK	CODE 10A 250V 3P DENMARK BK	27.01518.671
	N/A	POWER CORD 10A 250V 3PIN BK SOUTH AFRICA	CODE SOUTH AFRICA 16A 250V BK	27.01518.571
	N/A	POWER CORD 16A 250V SOUTH AFRICA BK	CODE 16A 250V SOUTH AFRICA BK	27.01518.681
	N/A	POWER CORD 10A 250V SWISS	CODE SWISS 2.5A 250V 3P BK	27.01518.581
	N/A	POWER CORD 10A 250V 3PIN SWISS BK	CODE 10A 250V 3P SWISS BK	27.01518.691
	N/A	POWER CORD 10A 250V 3PIN CHINA	CORD CHINA 10A 250V 3P	27.01518.591
	N/A	POWER CORD 10A 250V 3PIN CHINA BK	CORD 10A 250V 3P CHINA BK	27.01518.701
	N/A	POWER CORD 10A 250V 3PIN ITALY	CORD ITALY 10A 250V 3P BK	27.01518.611
	N/A	POWER CORD 10A 250V 3PIN ITALY BK	CORD 10A 250V 3P ITALY BK	27.01518.711
	N/A	POWER CORD 2.5A 250V AUSTRALIA	CORD 2.5A 250V AUSTRALIA BK	27.01518.621

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	POWER CORD ACA / ACNZ	POWER CODE ACA / ACNZ ANNIE	27.03218.021
	N/A	POWER CORD 2.5A 250V SOUTH AFRICA BK (INDIA)	CORD 2.5A 250V SOUTH AFRICA BK	27.01518.631
	N/A	POWER CORD 10A 250V SOUTH AFRICA BK (INDIA)	CORD 6A 250V SOUTH AFRICA BK	27.01518.721
	N/A	POWER CORD 7A 125V 2PIN JAPEN	CODE JAPAN 7A 125V 2P BK	27.01518.551
	N/A	POWER CODE 7A 125V 2PIN JAPAN	CODE 7A 125V JAPAN 2PIN BK	27.03518.161
	N/A	POWER CORD 250V 10A 3PIN ISRAEL	CORD 250V 10~16A 3P ISRAEL	27.01518.761
	N/A	POWER CORD 10A 250V ARGENTINE	CORD ARGENTINE,10A 250V3G,1.8M	27.01518.0U1
	N/A	POWER CORD 10A 250V 1.8M BRAZIL BLK	POWER CORD BRAZIL,BLK,1.8M	27.01518.A41
	N/A	LED BOARD CABLE	C.A. LED BD FFC BIWA 3RD	50.TK501.001
	N/A	TOUCHPAD CABLE	C.A. T/P FFC BIWA-JIHAW	50.TK501.002
CASE/COVER/BACKET ASSEMBLY				
	N/A	TOUCHPAD BRACKET	ASSY TP BRACKT YUKON	33.N2401.001
	10	UNITLOAD COVER	ASSY BIG DOOR YUKON	42.N2401.002

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	9	LOWER CASE W/ SPEAKER	ASSY L-CASE YUKON	60.N2401.001
SPEAKER				
	N/A	SPEAKER	SPEAKER BIWA	23.TK501.002
CASE/COVER/BACKET ASSEMBLY				
	7	UPPER CASE W/ COVER SWITCH CABLE	ASSY U-CASE YUKON	60.N2401.002
	5	MIDDLE COVER	ASSY MIDDLE COVER YUKON	42.N2401.001
CPU/PROCESSOR				
	N/A	CPU AMD ATHLON 2650E AM2+ 1.6G 512K 800 940 G2 15W, ADG2650IAV4DP	IC CPU ATHLON 2650E 1.6G G2	KC.AE002.265
COMBO MODULE				
	12	ASSEMBLY COMBO MODULE 24X	ODD NCB24XS FOR YUKON	6M.N2401.001
	N/A	OPTICAL BRACKET	BRKT ODD BIWA	33.TK501.002
	N/A	COMBO BEZEL	ASSY ODD BEZEL COMBO YUKON	42.N2401.003



	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	ODD TOSHIBA COMBO 12.7MM TRAY DL 24X TS-L463A LF W/O BEZEL SATA	COMBO SATA TSST/ TS-L463A OLAN	KO.02401.006
	12	COMBO MODULE 24X SONY CRX890S LF W/O BEZEL SATA	ODD COMBO 12.7 SATA CRX890S LF	KO.0240E.009
	12	ASSEMBLY SUPER-MULTI MODULE 8X	ODD NSM8XS FOR YUKON	6M.N2401.002
	N/A	OPTICAL BRACKET	BRKT ODD BIWA	33.TK501.002
	N/A	DVD-RW BEZEL	ASSY ODD BEZEL SMULTI YUKON	42.N2401.004
	N/A	ODD PIONEER SUPER-MULTI DRIVE 12.7MM TRAY DL 8X DVR-TD08RS LF W/O BEZEL SATA	S-MUL SATA PIONEER DVR-TD08RS	KU.00805.046
	N/A	ODD HLDS SUPER-MULTI DRIVE 12.7MM TRAY DL 8X GT10N LF W/O BEZEL SATA	ODD S-MUL SATA HLDS GT10N	KU.0080D.039
	N/A	ODD SONY SUPER-MULTI DRIVE 12.7MM TRAY DL 8X AD-7580S LF W/O BEZEL SATA	S-MULTI SATA SONY AD-7580S	KU.0080E.017
	N/A	ODD SONY SUPER-MULTI DRIVE 12.7MM TRAY DL 8X AD-7590S LF W/O BEZEL SATA	S-MULTI SATA SONY AD-7590S	KU.0080E.025
	N/A	ODD PLDS SUPER-MULTI DRIVE 12.7MM TRAY DL 8X DS-8A2S LF W/O BEZEL SATA	S-MULTI SATA PLDS/ DS-8A2S OLAN	KU.0080F.001
FAN				

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	FAN	FAN 14" FAN SUNON	23.TK501.001
CASE/COVER/BACKET ASSEMBLY				
	N/A	HDD BRACKET	ASSY HDD BRACKET YUKON	33.N2401.002
HDD/HARD DISK DRIVE				
	N/A	HDD 120GB 5400RPM SATA SEAGATE ST9120817AS LF F/ W:3.AAA	HDD 120GB SGT SATA ST9120817AS	KH.12001.032
	N/A	HDD 120GB 5400RPM SATA TOSHIBA MK1252GSX LF F/ W:LV010J	HDD 120GB TOSHIBA MK1252GSX	KH.12004.008
	N/A	HDD 120GB 5400RPM SATA HGST HT543212L9A300 FW:C40C	HDD 120GB HT543212L9A300 C40C	KH.12007.016
	N/A	HDD 120GB 5400RPM SATA WD WD1200BEVT-22ZCT0 LF F/W:11.01A11	HDD 120GB WD WD1200BEVT-22ZCT0	KH.12008.020
	N/A	HDD 160GB 5400RPM SATA SEAGATE ST9160310AS F/ W:2010	HDD 160GB SEAGATE ST9160310AS	KH.16001.034
	N/A	HDD 160GB 5400RPM SATA HGST HTS543216L9A300 F/ W:C30C	HDD 160GB HGST HTS543216L9A300	KH.16007.019
	N/A	HDD 160GB 5400RPM SATA WD WD1600BEVT-22ZCT0 FW:11.01A11	HDD 160GB WD WD1600BEVT-22ZCT0	KH.16008.022
HEATSINK				

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	CPU HEATSINK W/O FAN	ASSY THERMAL SINK FOXCON YUKON	60.N2401.003
KEYBOARD				
	6	KEYBOARD 14_15KB- EV2 88KS BLACK US INTERNATIONAL (BIG ERGO)	KB DARFON NSK- AGL1D UI USI88	KB.INT00.002
	6	KEYBOARD 14_15KB- EV2 88KS BLACK HEBREW (BIG ERGO)	KB DARFON NSK- AGL0H HB HEB88	KB.INT00.003
	6	KEYBOARD 14_15KB- EV2 89KS BLACK UK (BIG ERGO)	KB DARFON NSK- AGL0U UK UK89	KB.INT00.004
	6	KEYBOARD 14_15KB- EV2 89KS BLACK TURKISH(BIG ERGO)	KB DARFON NSK- AGL0T TR TUR89	KB.INT00.005
	6	KEYBOARD 14_15KB- EV2 88KS BLACK THAILAND (BIG ERGO)	KB DARFON NSK- AGL03 TI THA88	KB.INT00.006
	6	KEYBOARD 14_15KB- EV2 89KS BLACK SWISS(BIG ERGO)	KB DARFON NSK- AGL00 SW SWI89	KB.INT00.007
	6	KEYBOARD 14_15KB- EV2 89KS BLACK SWEDISH (BIG ERGO)	KB DARFON NSK- AGL0W SD SWE89	KB.INT00.008
	6	KEYBOARD 14_15KB- EV2 89KS BLACK SPANISH(BIG ERGO)	KB DARFON NSK- AGL0S SP SPA89	KB.INT00.009
	6	KEYBOARD 14_15KB- EV2 89KS SLO/ CRO(BIG ERGO)	KB DARFON NSK- AGL1F SLO SL89	KB.INT00.012
	6	KEYBOARD 14_15KB- EV2 88KS BLACK RUSSIAN (BIG ERGO)	KB DARFON NSK- AGL0R RU RUS88	KB.INT00.013
	6	KEYBOARD 14_15KB- EV2 89KS BLACK PORTUGUESE(BIG ERGO)	KB DARFON NSK- AGL06 PO POR89	KB.INT00.014
	6	KEYBOARD 14_15KB- EV2 89KS BLACK NORWEGIAN(BIG ERGO)	KB DARFON NSK- AGL0N NW NOR89	KB.INT00.016

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	6	KEYBOARD 14_15KB-EV2 93KS BLACK JAPANESE (BIG ERGO)	KB DARFON NSK-AGL0J JA JAPAN92	KB.INT00.019
	6	KEYBOARD 14_15KB-EV2 89KS ITALIAN(BIG ERGO)	KB DARFON NSK-AGL0E IT ITA89	KB.INT00.020
	6	KEYBOARD 14_15KB-EV2 89KS BLACK HUNGARIAN (BIG ERGO)	KB DARFON NSK-AGL0Q HG HUN89	KB.INT00.023
	6	KEYBOARD 14_15KB-EV2 88KS BLACK GREEK(BIG ERGO)	KB DARFON NSK-AGL01 GK GRE88	KB.INT00.024
	6	KEYBOARD 14_15KB-EV2 89KS GERMAN(BIG ERGO)	KB DARFON NSK-AGL0G GR GER89	KB.INT00.025
	6	KEYBOARD 14_15KB-EV2 89KS FRENCH(BIG ERGO)	KB DARFON NSK-AGL0F FR FRE89	KB.INT00.026
	6	KEYBOARD 14_15KB-EV2 89KS DANISH(BIG ERGO)	KB DARFON NSK-AGL0D DM DAN89	KB.INT00.029
	6	KEYBOARD 14_15KB-EV2 89KS BLACK CZECH (BIG ERGO)	KB DARFON NSK-AGL0C CZ CZE89	KB.INT00.030
	6	KEYBOARD 14_15KB-EV2 88KS BLACK TRADITIONAL CHINESE (BIG ERGO)	KB DARFON NSK-AGL02 TW TAI88	KB.INT00.031
	6	KEYBOARD 14_15KB-EV2 89KS BLACK CANADIAN FRENCH (BIG ERGO)	KB DARFON NSK-AGL0M CF F-C89	KB.INT00.032
	6	KEYBOARD 14_15KB-EV2 89KS BLACK BRAZILIAN(BIG ERGO)	KB DARFON NSK-AGL1B BP BRA89	KB.INT00.033
	6	KEYBOARD 14_15KB-EV2 89KS BLACK BELGIAN(BIG ERGO)	KB DARFON NSK-AGL1A BE BEL89	KB.INT00.034
	6	KEYBOARD 14_15KB-EV2 88KS BLACK ARABIC(BIG ERGO)	KB DARFON NSK-AGL0A AR ARA88	KB.INT00.035
	6	KEYBOARD 14_15KB-EV2 89KS BLACK ARABIC/FRENCH (BIG ERGO)	KB DARFON NSK-AGL2A ARABI-FR89	KB.INT00.212
	6	KEYBOARD 14_15KB-EV2 89KS BLACK ENGLISH/CANADIAN FRENCH (BIG ERGO)	KB DARFON NSK-AGL2M FR-C BI-89	KB.INT00.214

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	6	KEYBOARD 14_15KB-EV2 89KS BLANK CZECH-SLOVAK(BIG ERGO)	KB DARFON NSK-AGL13 CZ-SK	KB.I1400.004
LCD				
	N/A	LCD MODULE 14.1" WXGA GLARE W/ ANTENNA&MICROPHONE W/O 0.3M CAMERA	LCD N14.1WGAG W/ WLAN W/O CAMER	6M.N2301.001
	N/A	INVERTER BOARD YEC YNV-W15	INVERTER 17" YNV-W15	19.AR501.002
	N/A	INVERTER BOARD FOXCONN T62I240.03 V.00	INVERTER 17" T62I240.03 06L1	19.TQ901.002
	N/A	INVERTER BOARD 17" DARFON VK.21189.408	INVERTER 17" ROHS VK.21189.407	19.TRV01.001
	N/A	INVERTER BOARD SUMIDA TWS-458-118	INVERTER 17" TWS-458-118 MS	19.AR501.001
	N/A	LCD BRACKET RIGHT	BRACKET LCD R BIWA	33.TK501.004
	N/A	LCD BRACKET LEFT	BRACKET LCD L BIWA	33.TK501.005
	2	LCD CABLE	C.A. NON CCD LED YUKON HL	50.N2301.001
	4	LCD BEZEL 14.1" W/O CAMERA HOLE	ASSY NON CCD BEZEL 60 YUKON	60.N2301.001
	1	LCD COVER 14.1" W/ ANTENNA & MIC	ASSY LCD PANNEL YUKON	60.N2401.005
	3	LCD 14.1" WXGA AU B141EW04-V4 LF GLARE 200NITS 16MS	LCD 14.1"WXGA AU B141EW04-V4 G	LK.14105.018
	3	LCD 14.1" WXGA GLARE SAMSUNG LTN141W3-L01-J L6 LF 200NIT 16MS	LCD 14.1"WXGA LTN141W3-L01-J G	LK.14106.014
	3	LCD 14.1" WXGA LG LP141WX3-TLN1 GLARE LF	LCD 14.1"WXGA LG LP141WX3-TLN1	LK.14108.014
	3	LCD 14.1" WXGA CMO N141I3-L02 LF GLARE 200NITS 16MS	LCD 14.1"WXGA CMO N141I3-L02 G	LK.1410D.016
LCD				
	N/A	LCD MODULE 14.1" WXGA GLARE W/ MICROPHONE W/O ANTENNA&0.3M CAMERA	LCD N14.1WGAG W/O WLAN W/O CAM	6M.N2301.002

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	INVERTER BOARD YEC YNV-W15	INVERTER 17" YNV- W15	19.AR501.002
	N/A	INVERTER BOARD FOXCONN T62I240.03 V.00	INVERTER 17" T62I240.03 06L1	19.TQ901.002
	N/A	INVERTER BOARD 17" DARFON VK.21189.408	INVERTER 17" ROHS VK.21189.407	19.TRV01.001
	N/A	INVERTER BOARD SUMIDA TWS-458-118	INVERTER 17" TWS- 458-118 MS	19.AR501.001
	N/A	LCD BRACKET RIGHT	BRACKET LCD R BIWA	33.TK501.004
	N/A	LCD BRACKET LEFT	BRACKET LCD L BIWA	33.TK501.005
	2	LCD CABLE	C.A. NON CCD LED YUKON HL	50.N2301.001
	4	LCD BEZEL 14.1" W/O CAMERA HOLE	ASSY NON CCD BEZEL 60 YUKON	60.N2301.001
	1	LCD COVER 14.1" W/ MIC W/O ANTENNA	LCD PANNEL NON ANTENNA YUKON	60.N2401.006
	3	LCD 14.1" WXGA AU B141EW04-V4 LF GLARE 200NITS 16MS	LCD 14.1"WXGA AU B141EW04-V4 G	LK.14105.018
	3	LCD 14.1" WXGA GLARE SAMSUNG LTN141W3-L01-J L6 LF 200NIT 16MS	LCD 14.1"WXGA LTN141W3-L01-J G	LK.14106.014
	3	LCD 14.1" WXGA LG LP141WX3-TLN1 GLARE LF	LCD 14.1"WXGA LG LP141WX3-TLN1	LK.14108.014
	3	LCD 14.1" WXGA CMO N141I3-L02 LF GLARE 200NITS 16MS	LCD 14.1"WXGA CMO N141I3-L02 G	LK.1410D.016
MAINBOARD				
	8	MAINBOARD EMD620 UMA ATI RS6950MC SB600 LF W/RTC BATTERY	YUKON MB 08226-1 6L D	MB.N2401.001
MEMORY				
	N/A	SODIMM 1GB DDRII667 NANYA NT1GT64UH8D0FN- 3C LF (0.07U)	SODIMM 1G NT1GT64UH8D0FN- 3C	KN.1GB03.026

	NO.	PART NAME	DESCRIPTION	ACER PART NO.
	N/A	SODIMM 1GB DDRII667 SAMSUNG M470T2864QZ3-CE6 LF	SODIMM 1G M470T2864QZ3-CE6	KN.1GB0B.016
	N/A	SODIMM 1GB DDRII667 A-DATA HYOPE1A0834Z LF	SODIMM 1G HYOPE1A0834Z	KN.1GB0C.005
	N/A	SODIMM 1GB DDRII667 HYNIX HYMP112S64CP6-Y5 LF	SODIMM 1G HYMP112S64CP6-Y5	KN.1GB0G.012
	N/A	SODIMM 2GB DDRII667 NANYA NT2GT64U8HD0BN- 3C LF (0.07U)	SODIMM 2G NT2GT64U8HD0BN- 3C	KN.2GB03.011
	N/A	SODIMM 2GB DDRII667 SAMSUNG M470T5663QZ3-CE6 LF	SODIMM 2G M470T5663QZ3-CE6	KN.2GB0B.003
	N/A	SODIMM 2GB DDRII667 A-DATA HYOPE1B163BZ LF	SODIIMM 2G HYOPE1B163BZ	KN.2GB0C.001
	N/A	SODIMM 2GB DDRII667 HYNIX HYMP125S64CP8-Y5 LF	SODIMM 2G HYMP125S64CP8-Y5	KN.2GB0G.004
MISCELLANEOUS				
	N/A	NAME PLATE EMACHINES D620	PLT NAME,YUKON	40.N2401.001
	N/A	LOGO PLATE FOR PANEL	MYLAR E LOGO FOG PLANT K.S.I	47.N2401.001
	N/A	LCD SCREW RUBBER	RUB SQUARE LCD	47.TK501.001
SCREW				
	N/A	SCREW	SCREW M2.5*L6 NYLOK CR3+	86.00E33.736
	N/A	SCREW	SCRW WAF M2*4 BZNYLOK CR3+	86.00E92.724
	N/A	SCREW	SCRW M2.5X4 NYLOK BZN	86.00F00.734
	N/A	SCREW	SCREW M3x4(86.9A524.4R0)	86.9A524.4R0
	N/A	SCREW	SCREW WAFER NYLOK NI 2ML3	86.9A552.3R0
	N/A	SCREW	SCRW M2*4 WAFER NI	86.9A552.4R0
	N/A	SCREW M2.5*L5 BLACK ZN+NYLOK	M2.5*L5 BLACK ZN+NYLOK	86.TK501.001
	N/A	SCREW M2*18 CR3NYLOK BIWA	SCRW M2*18 CR3NYLOK BIWA	86.TK501.002

Model Definition and Configuration

eMachines D620

Please click the red paper clip icon below for more details.



Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® Vista™ Business, Vista Home Premium, and Vista Home Basic environment.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the eMachines D620 series Compatibility Test Report released by the Acer Mobile System Testing Department.

Microsoft® Windows® Vista™ Environment Test

Vendor	Device Name
I/O Peripheral List-External CRT	
ViewSonic	G220F
I/O Peripheral List - TV	
Vendor	Device Name
Westenhouse	W37G (HDMI)
Panasonic	TC-37MPK (VGA/HDMI)
I/O Peripheral List - External LCD	
Vendor	Device Name
Acer	FP751 17" TFT LCD
Acer	17" LCD Monitor (DVI) Model:AL1721(*1)
ViewSonic	20" LCD VD201b(DVI-I) ,(DVI-D),(D-sub) (*1)
Acer	Acer P243W 24"(Resolution:1920x1200; Port:D-Sub,DVI-D,DVIw,HDCP HDMI)
Dell	DELL SP2208WFP 22
I/O Peripheral List - Projector	
DELL	3300MP Projector
I/O Peripheral List - USB Keyboard / Mouse	
Vendor	Device Name
Logitech	First Wheel Mouse
Logitech	Internet Navigator Keyboard
BELKIN	Miniglow Optical USB Mouse
I/O Peripheral List - Earphone / Microphone	
Hawk	Hawk Stereo Headset 933
I/O Peripheral List - USB Speaker / Joystick	
Peripheral	DOLBY HEADPHONE 5.1channel
Panasonic	USB Speaker EAB-MPC57USB
JS	iFun USB Speaker(JS1200UA)
Dell	Dell USB Speaker
I/O Peripheral List - USB Camera	
Canon	Canon Digital IXUS 860 ISU
I/O Peripheral List - USB Storage Drive	
PQI	6 IN 1 Flash Card Reader/Writer(*1)
I/O Peripheral List - USB Flash Drive	
Sony	Micro Bault Pro USD-5G 5GB USB Flash
Apacer	Handy Drive The USB Flash Drive 256MB
IBM	IBM 512MB USB2.0 Memory Key
Apacer	Apacer USB2.0 Flash Drive 2GB Memory Key
SanDisk	SanDisk USB 2GB Cruzer Micro Skin USB2.0 Flash Drive
Transcend	Transcend JetFlash USB2.0 Flash Drive V85 8GB Memory Key
Apacer	Apacer AH421 8GB
A-Data	A-Data PD16 Vista 16GB
I/O Peripheral List - USB Hub and Others	

Vendor	Device Name
IOGEAR	4 Port Hub (usb 2.0)
Huawei	Huawei mobile connect E220 USB Modem 3G (E220: HSDPA/UMTS/EDGE/GPRS/GSM)
I/O Peripheral List - USB ODD	
Plextor	DVD+R/RW (Usb2.0)
Logitec	CDRW + DVDROM combo USB interface
I/O Peripheral List - USB HDD	
Transcend	2.5" Portable 80GB Hard Disk
I/O Peripheral List - Access Point 802.11b	
Cisco	Aironet 350 [ModeNum:350]
Cisco	Aironet 1230 (*1) [ModeNum:AIR-AP1230B Series]
I/O Peripheral List - Access Point 802.11g	
Vendor	Device Name
D-Link	Building Networks People WiFi Certified a/b/g Wrieless 108AG [ModeNum:DWL-7100AP]

For system components, please click the paper clip icon below for AVLK.



Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- User's manuals
- BIOS updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.

